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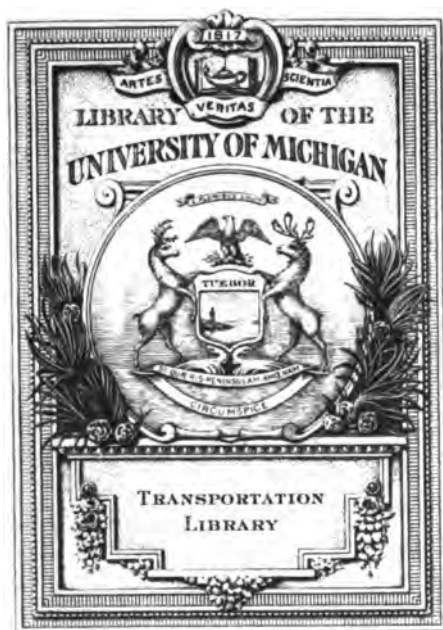
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1847

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LIST OF PATENTS

FOR

INVENTIONS AND DESIGNS,

ISSUED BY THE

UNITED STATES,

FROM 1790 TO 1847,

WITH THE

PATENT LAWS AND NOTES OF DECISIONS

OF THE

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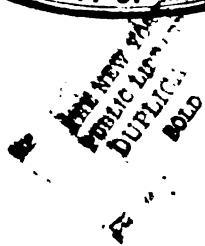
Engineering

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PATENT LAWS.

CONSTITUTION OF THE UNITED STATES,

ARTICLE 1st, SECTION 8th.

“The Congress shall have power, &c., to promote the progress of science and useful arts, by securing for limited times to Authors and Inventors the exclusive right to their respective writings and discoveries.” Also, “to make all laws which shall be necessary and proper for carrying into execution the foregoing powers.”

CHAP. VII.—*An Act to promote the progress of useful Arts.*

SECTION 1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That upon the petition of any person or persons to the Secretary of State, the Secretary for the department of war, and the Attorney General of the United States, setting forth, that he, she, or they, hath or have invented or discovered any useful art, manufacture, engine, machine, or device, or any improvement therein not before known or used, and praying that a patent may be granted therefor, it shall and may be lawful to and for the said Secretary of State, the Secretary for the department of war, and the Attorney General, or any two of them, if they shall deem the invention or discovery sufficiently useful and important, to cause letters patent to be made out in the name of the United States, to bear teste by the President of the United States, reciting the allegations and suggestions of the said petition, and describing the said invention or discovery, clearly, truly, and fully, and thereupon granting to such petitioner or petitioners, his, her or their heirs, administrators or assigns for any term not exceeding fourteen years, the sole and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said invention or discovery; which letters patent shall be delivered to the Attorney General of the United States to be examined, who shall, within fifteen days next after the delivery to him, if he shall find the same conformable to this act, certify it to be so at the foot thereof, and present the letters patent so certified to the President, who shall cause the seal of the United States to be thereto affixed, and the same shall be good and available to the grantee or grantees by force of this act, to all and every intent and purpose herein contained, and shall be recorded in a book to be kept for that purpose in the office of the Secretary of State, and

Patents for useful discoveries, how applied for, and granted.

Repealed by the act of 21st Feb., 1793, chap. 11.

The Secretary of State, the Sec. of War, and the Attor. General, or any two of them, if they shall deem the invention, &c., useful and important, to cause letters patent to be issued.

Continuance of a patent.

Attorney General to certify the conformity of the patent with this act.

Patents to be recorded.

delivered to the patentee or his agent, and the delivery thereof shall be entered on the record and endorsed on the patent by the said Secretary at the time of granting the same.

Specification in writing, with a draft, or model, thereof, to be delivered and filed in the office of the Secretary of State.

SEC. 2. *And be it further enacted*, That the grantee or grantees of each patent shall, at the time of granting the same, deliver to the Secretary of State a specification in writing, containing a description, accompanied with drafts or models, and explanations and models (if the nature of the invention or discovery will admit of a model) of the thing or things, by him or them invented or discovered, and described as aforesaid, in the said patents; which specification shall be so particular, and said models so exact, as not only to distinguish the invention or discovery from other things before known and used, but also to enable a workman or other person skilled in the art or manufacture, whereof it is a branch, or wherewith it may be nearest connected, to make, construct, or use the same, to the end that the public may have the full benefit thereof, after the expiration of the patent term; which specification shall be filed in the office of the said Secretary, and certified copies thereof, shall be competent evidence in all courts and before all jurisdictions, where any matter or thing, touching or concerning such patent, right, or privilege, shall come in question.

Certified copies in what cases to be evidence.

Copies of specification, and models may be taken.

SEC. 3. *And be it further enacted*, That upon the application of any person to the Secretary of State, for a copy of any such specification, and for permission to have similar model or models made, it shall be the duty of the Secretary to give such copy, and to permit the person so applying for a similar model or models, to take, or make, or cause the same to be taken or made, at the expense of such applicant.

Penalty for making, &c, any art, &c, for which a patent has been granted.

SEC. 4. *And be it further enacted*, That if any person or persons shall devise, make, construct, use, employ, or vend within these United States, any art, manufacture, engine, machine or device, or any invention or improvement upon, or in any art, manufacture, engine, machine or device, the sole and exclusive right of which shall be so as aforesaid granted by patent to any person or persons, by virtue of and in pursuance of this act, without the consent of the patentee or patentees, their executors, administrators or assigns, first had and obtained in writing, every person so offending, shall forfeit and pay to the said patentee or patentees, his, her or their executors, administrators or assigns, such damages as shall be assessed by a jury, and moreover shall forfeit to the person aggrieved, the thing or things so devised, made, constructed, used, employed or vend- ed, contrary to the true intent of this act, which may be recovered in an action on the case founded on this act.

Damages to be assessed by a jury.

Patents surreptitiously obtained

SEC. 5. *And be it further enacted*, That upon oath or affirmation made before the judge of the district court, where the defendant resides, that any patent which shall be issued in pursuance of this act, was obtained surreptitiously by, or upon false suggestion, and motion made to the said court, within one year after issuing the said patent, but not afterwards, it shall

and may be lawful to and for the judge of the said district court, if the matter alleged shall appear to him to be sufficient, to grant a rule that the patentee or patentees, his, her, or their executors, administrators or assigns, show cause why process should not issue against him, her, or them, to repeal such patents; and if sufficient cause shall not be shown to the contrary, the rule shall be made absolute, and thereupon the said judge shall order process to be issued as aforesaid, against such patentee or patentees, his, her, or their executors, administrators, or assigns. And in case no sufficient cause shall be shown to the contrary, or if it shall appear that the patentee was not the first and true inventor or discoverer, judgment shall be rendered by such court for the repeal of such patent or patents; and if the party at whose complaint the process issued, shall have judgment given against him, he shall pay all such costs as the defendant shall be put to in defending the suit, to be taxed by the court, and recovered in such manner as costs expended by defendants, shall be recovered in due course of law.

how to be repealed.

SEC. 6. *And be it further enacted*, That in all actions to be brought by such patentee or patentees, his, her, or their executors, administrators or assigns, for any penalty incurred by virtue of this act, the said patents or specifications shall be *prima facie* evidence, that the said patentee or patentees was or were the first and true inventor or inventors, discoverer or discoverers of the thing so specified, and that the same is truly specified; but that nevertheless the defendant or defendants may plead the general issue, and give this act, and any special matter whereof notice in writing shall have been given to the plaintiff, or his attorney, thirty days before the trial, in evidence, tending to prove that the specification filed by the plaintiff does not contain the whole of the truth concerning his invention or discovery; or that it contains more than is necessary to produce the effect described; and if the concealment of part, or the addition of more than is necessary, shall appear to have been intended to mislead, or shall actually mislead the public, so as the effect described cannot be produced by the means specified, then, and in such cases, the verdict and judgment shall be for the defendant.

In actions for penalty, patents to be deemed *prima facie* evidence of the first discovery; but special matter may be given in evidence; and to what effect.

SEC. 7. *And be it further enacted*, That such patentee as aforesaid, shall, before he receives his patent, pay the following fees to the several officers employed in making out and perfecting the same, to wit: For receiving and filing the petition, fifty cents; for filing specifications, per copy-sheet containing one hundred words, ten cents; for making out patent, two dollars; for affixing great seal, one dollar; for indorsing the day of delivering the same to the patentee, including all intermediate services, twenty cents.

Patent fees.

Approved April 10, 1790.

CHAP. IX.—*An Act to promote the progress of useful arts, and to repeal the act heretofore made for that purpose.*

Act of 1790,
chap. 7.

Letters patent,
how & by whom
made out.

Act of April 10,
1790, ch. 33, re-
pealed.

To bear teste
by the President,
and

to be examined by
the Attorney
General.

1800, ch. 25.

The liberty of
using an im-
provement de-
fined.

Changing the
form or propor-
tions of any ma-
chine, &c., not to
be a discovery.

How to proceed
to obtain letters
patent.

1800, ch. 25,
sec. 2.

Specification.

SECTION 1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That when any person or persons, being a citizen or citizens of the United States, shall allege that he or they have invented any new and useful art, machine, manufacture or composition of matter, or any new and useful improvement on any art, machine, manufacture or composition of matter, not known or used before the application, and shall present a petition to the Secretary of State, signifying a desire of obtaining an exclusive property in the same, and praying that a patent may be granted therefor, it shall and may be lawful for the said Secretary of State, to cause letters patent to be made out in the name of the United States, bearing teste by the President of the United States, reciting the allegations and suggestions of the said petition, and giving a short description of the said invention or discovery, and thereupon granting to such petitioner, or petitioners, his, her, or their heirs, administrators or assigns, for a term not exceeding fourteen years, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said invention or discovery, which letters patent shall be delivered to the Attorney General of the United States, to be examined; who, within fifteen days after such delivery, if he finds the same conformable to this act, shall certify accordingly, at the foot thereof, and return the same to the Secretary of State, who shall present the letters patent thus certified, to be signed, and shall cause the seal of the United States to be thereto affixed: and the same shall be good and available to the grantee or grantees, by force of this act, and shall be recorded in a book, to be kept for that purpose, in the office of the Secretary of State, and delivered to the patentee or his order.

SEC. 2. *Provided always, and be it further enacted,* That any person, who shall have discovered an improvement in the principle of any machine, or in the process of any composition of matter, which shall have been patented, and shall have obtained a patent for such improvement, he shall not be at liberty to make, use or vend the original discovery, nor shall the first inventor be at liberty to use the improvement: And it is hereby enacted and declared, that simply changing the form or the proportions of any machine, or composition of matter, in any degree, shall not be deemed a discovery.

SEC. 3. *And be it further enacted,* That every inventor, before he can receive a patent, shall swear or affirm, that he does verily believe, that he is the true inventor or discoverer of the art, machine, or improvement, for which he solicits a patent, which oath or affirmation may be made before any person authorized to administer oaths, and shall deliver a written description of his invention, and of the manner of using, or process of compounding the same, in such full, clear, and exact terms, as to distinguish the same from all other things before

known, and to enable any person skilled in the art or science, of which it is a branch, or with which it is most nearly connected, to make, compound, and use the same. And in the case of any machine, he shall fully explain the principle, and the several modes in which he has contemplated the application of that principle or character, by which it may be distinguished from other inventions; and he shall accompany the whole with drawings and written references, where the nature of the case admits of drawings, or with specimens of the ingredients, and of the composition of matter, sufficient in quantity for the purpose of experiment, where the invention is of a composition of matter; which description, signed by himself and attested by two witnesses, shall be filed in the office of the Secretary of State, and certified copies thereof shall be competent evidence in all courts, where any matter or thing, touching such patent right, shall come in question. And such inventor shall, moreover, deliver a model of his machine, provided, the secretary shall deem such model to be necessary.

Specification.

SEC. 4. *And be it further enacted*, That it shall be lawful for any inventor, his executor or administrator, to assign the title and interest in the said invention, at any time, and the assignee having recorded the said assignment in the office of the Secretary of State, shall thereafter stand in the place of the original inventor, both as to right and responsibility, and so the assignee of assigns, to any degree.

Inventors may assign their titles.

Record of assignment to be made in the office of the Secretary of State.

SEC. 5. *And be it further enacted*, That if any person shall make, devise, and use, or sell the thing so invented, the exclusive right of which shall, as aforesaid, have been secured to any person by patent, without the consent of the patentee, his executors, administrators, or assigns, first obtained in writing, every person so offending, shall forfeit and pay to the patentee a sum, that shall be at least equal to three times the price, for which the patentee has usually sold or licensed to other persons, the use of the said invention; which may be recovered in an action on the case founded on this act, in the circuit court of the United States, or any other court having competent jurisdiction.

Forfeiture on using patented inventions without leave.

Three times the price to be the penalty.

How recovered.

SEC. 6. *Provided always, and be it further enacted*, That the defendant in such action shall be permitted to plead the general issue, and give this act and any special matter, of which notice in writing may have been given to the plaintiff, or his attorney, thirty days before trial, in evidence, tending to prove that the specification, filed by the plaintiff, does not contain the whole truth relative to his discovery, or that it contains more than is necessary to produce the described effect, which concealment or addition shall fully appear to have been made, for the purpose of deceiving the public, or that the thing, thus secured by patent, was not originally discovered by the patentee, but had been in use, or had been described in some public work anterior to the supposed discovery of the patentee, or that he had surreptitiously obtained a patent for the discovery of

How defendants may give this act in evidence.

And judgment shall be given.

another person: in either of which cases, judgment shall be rendered for the defendant, with costs, and the patent shall be declared void.

State rights to inventions when to be deemed void.

SEC. 7. *And be it further enacted*, That where any State, before its adoption of the present form of government, shall have granted an exclusive right to any invention, the party, claiming that right, shall not be capable of obtaining an exclusive right under this act, but on relinquishing his right under such particular State, and of such relinquishment, his obtaining an exclusive right under this act shall be sufficient evidence.

How applications, depending under former law shall be prosecuted under this act.

SEC. 8. *And be it further enacted*, That the persons, whose applications for patents, were, at the time of passing this act, depending before the Secretary of State, Secretary at War, and Attorney General, according to the act, passed the second session of the first Congress, intituled "An act to promote the progress of useful arts," on complying with the conditions of this act, and paying the fees herein required, may pursue their respective claims to a patent under the same.

1790, ch. 7.

Proceedings to be had on interfering applications.

SEC. 9. *And be it further enacted*, That in case of interfering applications, the same shall be submitted to the arbitration of three persons, one of whom shall be chosen by each of the applicants, and the third person shall be appointed by the Secretary of State; and the decision or award of such arbitrators, delivered to the Secretary of State in writing, and subscribed by them, or any two of them, shall be final, as far as respects the granting of the patent: And if either of the applicants shall refuse or fail to chuse an arbitrator, the patent shall issue to the opposite party. And where there shall be more than two interfering applications, and the parties applying shall not all unite in appointing three arbitrators, it shall be in the power of the Secretary of State to appoint three arbitrators for the purpose.

And against persons surreptitiously obtaining patents.

SEC. 10. *And be it further enacted*, That upon oath or affirmation being made before the judge of the district court, where the patentee, his executors, administrators, or assigns reside, that any patent, which shall be issued in pursuance of this act, was obtained surreptitiously, or upon false suggestion, and motion made to the said court, within three years after issuing the said patent, but not afterwards, it shall and may be lawful for the judge of the said district court, if the matter alleged shall appear to him to be sufficient, to grant a rule, that the patentee, or his executor, administrator, or assign show cause why process should not issue against him to repeal such patent. And if sufficient cause shall not be shown to the contrary, the rule shall be made absolute, and thereupon the said judge shall order process to be issued against such patentee, or his executors, administrators, or assigns, with costs of suit. And in case no sufficient cause shall be shown to the contrary, or if it shall appear that the patentee was not the true inventor or discoverer, judgment shall be rendered by such court for the repeal of such patent; and if the party, at whose complaint the process issued,

Repeal of a patent illegally obtained.

shall have judgment given against him, he shall pay all such costs as the defendant shall be put to in defending the suit, to be taxed by the court, and recovered in due course of law.

SEC. 11. *And be it further enacted*, That every inventor, before he presents his petition to the Secretary of State, signifying his desire of obtaining a patent, shall pay into the treasury thirty dollars, for which he shall take duplicate receipts; one of which receipts he shall deliver to the Secretary of State, when he presents his petition; and the money, thus paid, shall be in full for the sundry services to be performed in the office of the Secretary of State, consequent on such petition, and shall pass to the account of clerk-hire in that office. *Provided nevertheless*, That for every copy, which may be required at the said office, of any paper respecting any patent that has been granted, the person, obtaining such copy, shall pay, at the rate of twenty cents, for every copy-sheet of one hundred words, and for every copy of a drawing, the party obtaining the same, shall pay two dollars; of which payments, an account shall be rendered, annually, to the treasury of the United States, and they shall also pass to the account of clerk-hire in the office of the Secretary of State.

Inventor before presenting petition to pay \$30 into the treasury.

Copying fees.

SEC. 12. *And be it further enacted*, That the act, passed the tenth day of April, in the year one thousand seven hundred and ninety, intituled "An act to promote the progress of useful arts," be, and the same is hereby repealed. *Provided always*, That nothing, contained in this act, shall be construed to invalidate any patent that may have been granted under the authority of the said act; and all patentees under the said act, their executors, administrators, and assigns, shall be considered within the purview of this act, in respect to the violation of their rights; provided, such violations shall be committed after the passing of this act.

Act of April 10, 1790, ch. 7, repealed.

Proviso.

Approved February 21, 1793.

CHAP. LVIII.—*An Act supplementary to the act, intituled "An Act to promote the progress of Useful Arts."*

(Obsolete.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all suits, actions, process and proceedings, heretofore had in any district court of the United States, under an act passed the tenth day of April, in the year one thousand seven hundred and ninety, intituled "An Act to promote the progress of useful arts," which may have been set aside, suspended or abated, by reason of the repeal of the said act, may be restored, at the instance of the plaintiff or defendant, within one year from and after the passing of this act, in the said courts, to the same situation, in which they may have been, when they were so set aside, suspended or abated; and that the parties to the said suits, actions, process or proceedings, be, and are hereby inti-

Suits, &c., had under certain act, revived.

Act of Feb. 21, 1793, ch. 11.
Act of April 10, 1790, ch. 7.

In what manner.

tled to proceed in such cases, as if no such repeal of the act aforesaid had taken place. *Provided always*, That before any order or proceeding, other than that for continuing the same suits, after the reinstating thereof, shall be entered or had, the defendant or plaintiff, as the case may be, against whom the same may have been reinstated, shall be brought into court by summons, attachment, or such other proceeding, as is used in other cases for compelling the appearance of a party.

Approved June 7, 1794.

CHAP. XXV.—*An Act to extend the privilege of obtaining patents for useful discoveries and inventions, to certain persons therein mentioned, and to enlarge and define the penalties for violating the rights of patentees.*

(Repealed.)

Aliens having resided two years within the United States entitled to the benefit of the former act.

Act of Feb. 21, 1793, ch. 11.

Oath to be taken by such resident, that the invention or discovery hath not been used.

The legal representatives of a deceased inventor may obtain a patent.

SECTION 1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That all and singular the rights and privileges given, intended or provided to citizens of the United States, respecting patents for new inventions, discoveries, and improvements, by the act, intituled “An act to promote the progress of useful arts, and to repeal the act heretofore made for that purpose,” shall be, and hereby are extended and given to all aliens who at the time of petitioning in the manner prescribed by the said act, shall have resided for two years within the United States, which privileges shall be obtained, used, and enjoyed, by such persons, in as full and ample manner, and under the same conditions, limitations and restrictions, as by the said act is provided and directed in the case of citizens of the United States. *Provided always*, That every person petitioning for a patent for any invention, art or discovery, pursuant to this act, shall make oath or affirmation before some person duly authorized to administer oaths before such patent shall be granted, that such invention, art or discovery hath not, to the best of his or her knowledge or belief, been known or used either in this or any foreign country, and that every patent which shall be obtained pursuant to this act, for any invention, art or discovery, which it shall afterwards appear had been known or used previous to such application for a patent, shall be utterly void.

SEC. 2. *And be it further enacted*, That where any person hath made, or shall have made, any new invention, discovery or improvement, on account of which a patent might, by virtue of this or the above mentioned act, be granted to such person, and shall die before any patent shall be granted therefor, the right of applying for and obtaining such patent, shall devolve on the legal representatives of such person in trust for the heirs at law of the deceased, in case he shall have died intestate; but if otherwise, then in trust for his devisees, in as full and ample manner, and under the same conditions, limitations and restrictions, as the same was held or might have been claimed or enjoyed by such person, in his or her lifetime; and when application for a patent shall be made by such legal representatives,

the oath or affirmation, provided in the third section of the before-mentioned act, shall be so varied as to be applicable to them.

SEC. 3. *And be it further enacted*, That where any patent shall be, or shall have been granted pursuant to this or the above-mentioned act, and any person without the consent of the patentee, his or her executors, administrators or assigns first obtained in writing, shall make, devise, use, or sell the thing whereof the exclusive right is secured to the said patentee by such patent, such person so offending, shall forfeit and pay to the said patentee, his executors, administrators or assigns, a sum equal to three times the actual damage sustained by such patentee, his executors, administrators, or assigns, from or by reason of such offence, which sum shall and may be recovered, by action on the case founded on this and the above-mentioned act, in the circuit court of the United States, having jurisdiction thereof.

Damages for breach of patent right.

To be recovered by action on the case in the circuit court.

SEC. 4. *And be it further enacted*, That the fifth section of the above-mentioned act, intituled "An act to promote the progress of useful arts, and to repeal the act heretofore made for that purpose," shall be, and hereby is repealed.

Repeal of part of the former act. Act of Feb. 21, 1793, ch. 11.

Approved, April 17, 1800.

CHAP. XIX.—*An Act to extend the jurisdiction of the circuit courts of the United States to cases arising under the law relating to patents.*

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the circuit courts of the United States shall have original cognisance, as well in equity as at law, of all actions, suits, controversies, and cases, arising under any law of the United States, granting or confirming to authors or inventors the exclusive right to their respective writings, inventions, and discoveries: and upon any bill in equity, filed by any party aggrieved in any such cases, shall have authority to grant injunctions, according to the course and principles of courts of equity, to prevent the violation of the rights of any authors or inventors, secured to them by any laws of the United States, on such terms and conditions as the said courts may deem fit and reasonable: *Provided, however*, That from all judgments and decrees of any circuit courts, rendered in the premises, a writ of error or appeal, as the case may require, shall lie to the Supreme Court of the United States, in the same manner, and under the same circumstances, as is now provided by law in other judgments and decrees of such circuit courts.

The circuit courts to have original cognisance, in equity and at law, in controversies respecting the right to inventions and writings.

Act of Feb. 21, 1793, ch. 11.
Act of May 31, 1790, ch. 15.

Proviso.

Approved, February 15, 1819.

CHAP. CLXII.—*An Act concerning patents for useful inventions.*

Act of July 4,
1836, ch. 357.

List of expired
patents to be an-
nually reported
to Congress.

Form of appli-
cation to prolong
or renew patent.

Patent to be in-
valid in case of
inventor not hav-
ing complied
with terms, &c.

1793, ch. 11.

Secretary of
State, upon sur-
render, &c., to
grant a new pa-
tent.

In case of death,
&c., right to vest
in executors, &c.

Proviso.

Be it enacted in the Senate and House of Representatives of the United States of America in Congress assembled, That it shall be the duty of the Secretary of State, annually, in the month of January, to report to Congress, and to publish in two of the newspapers printed in the city of Washington, a list of all the patents for discoveries, inventions, and improvements, which shall have expired within the year immediately preceding, with the names of the patentees, alphabetically arranged.

SEC. 2. And be it further enacted, That application to Congress to prolong or renew the term of a patent, shall be made before its expiration, and shall be notified at least once a month, for three months before its presentation, in two newspapers printed in the city of Washington, and in one of the newspapers in which the laws of the United States shall be published in the State or territory in which the patentee shall reside. The petition shall set forth particularly the grounds of the application. It shall be verified by oath; the evidence in its support may be taken before any judge or justice of the peace; it shall be accompanied by a statement of the ascertained value of the discovery, invention, or improvement, and of the receipts and expenditures of the patentee, so as to exhibit the profit or loss arising therefrom.

*SEC. 3. And be it further enacted, That wherever any patent which has been heretofore, or shall be hereafter, granted to any inventor in pursuance of the act of Congress, entitled "An act to promote the progress of useful arts, and to repeal the act heretofore made for that purpose," passed on the twenty-first day of February, in the year of our Lord, one thousand seven hundred and ninety-three, or of any of the acts supplementary thereto, shall be invalid or inoperative, by reason that any of the terms or conditions prescribed in the third section of the said first mentioned act, have not, by inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, been complied with on the part of the said inventor, it shall be lawful for the Secretary of State, upon the surrender to him of such patent, to cause a new patent to be granted to the said inventor for the same invention for the residue of the period then unexpired, for which the original patent was granted, upon his compliance with the terms and conditions prescribed in the said third section of the said act. And, in case of his death, or any assignment by him made of the same patent, the like right shall vest in his executors and administrators, or assignee or assignees: *Provided, however,* That such new patent, so granted, shall, in all respects, be liable to the same matters of objection and defence as any original patent granted under the said first-mentioned act. But no public use or privilege of the invention so patented, derived from or after the grant of the original patent, either under any special license of the inventor, or without the consent of the patentee that there shall be a free public use thereof, shall, in any manner, prejudice*

his right of recovery for any use or violation of his invention after the grant of such new patent as aforesaid.

Approved, July 3, 1832.

CHAP. CCIII.—*An Act concerning the issuing of patents to aliens, for useful discoveries and inventions.*

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the privileges granted to the aliens described in the first section of the act, to extend the privilege of obtaining patents for useful discoveries and inventions to certain persons therein mentioned, and to enlarge and define the penalties for violating the rights of patentees, approved April seventeenth, eighteen hundred, be extended, in like manner, to every alien, who, at the time of petitioning for a patent, shall be resident in the United States, and shall have declared his intention, according to law, to become a citizen thereof: Provided, That every patent granted by virtue of this act and the privileges thereto appertaining, shall cease and determine and become absolutely void without resort to any legal process to annul or cancel the same in case of a failure on the part of any patentee, for the space of one year from the issuing thereof, to introduce into public use in the United States the invention or improvement for which the patent shall be issued; or in case the same for any period of six months after such introduction shall not continue to be publicly used and applied in the United States, or in case of failure to become a citizen of the United States, agreeably to notice given at the earliest period within which he shall be entitled to become a citizen of the United States.

The privileges granted to aliens extended.

Act of April 17, 1806, ch. 38.

Proviso.

Approved, July 13, 1832.

CHAP. CCCLVII.—*An Act to promote the progress of the useful arts, and to repeal all acts and parts of acts heretofore made for that purpose.*

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be established and attached to the Department of State an office to be denominated the Patent Office, the chief officer of which shall be called the Commissioner of Patents, to be appointed by the President, by and with the advice and consent of the Senate, whose duty it shall be, under the direction of the Secretary of State, to superintend, execute, and perform all such acts and things touching and respecting the granting and issuing of patents for new and useful discoveries, inventions, and improvements, as are herein provided for, or shall hereafter be, by law, directed to be done and performed, and shall have the charge and custody of all the books, records, papers, models, machines, and all other things belonging to said office. And said Commissioner shall receive the same compensation as is allowed by law to the Commissioner of the

March 3, 1837, ch. 43.

Commissioner of Patents to be appointed, and his duties. August 29, 1842, ch. 363.

Indian department, and shall be entitled to send and receive letters and packages by mail, relating to the business of the office, free of postage.

Chief clerk.

SEC. 2. *And be it further enacted*, That there shall be in said office an inferior officer, to be appointed by the said principal officer, with the approval of the Secretary of State, to receive an annual salary of seventeen hundred dollars, and to be called the Chief Clerk of the Patent Office, who, in all cases during the necessary absence of the Commissioner, or when the said principal office shall become vacant, shall have the charge and custody of the seal, and of the records, books, papers, machines, models, and all other things belonging to the said office, and shall perform the duties of Commissioner during such vacancy. And the said Commissioner may also, with like approval, appoint an examining clerk, at an annual salary of fifteen hundred dollars; two other clerks, at twelve hundred dollars each, one of whom shall be a competent draughtsman; one other clerk, at one thousand dollars; a machinist, at twelve hundred and fifty dollars; and a messenger, at seven hundred dollars. And said commissioner, clerks, and every other person appointed and employed in said office, shall be disqualified and interdicted from acquiring or taking, except by inheritance, during the period for which they shall hold their appointments, respectively, any right or interest, directly or indirectly, in any patent for an invention or discovery which has been, or may hereafter be, granted.

Examining clerk, and other officers.

Officers to make oath, &c.

SEC. 3. *And be it further enacted*, That the said principal officer, and every other person to be appointed in the said office, shall, before he enters upon the duties of his office or appointment, make oath or affirmation truly and faithfully to execute the trust committed to him. And the said Commissioner and the Chief Clerk shall also, before entering upon their duties, severally give bonds, with sureties, to the Treasurer of the United States, the former in the sum of ten thousand dollars, and the latter in the sum of five thousand dollars, with condition to render a true and faithful account to him or his successor in office, quarterly, of all moneys which shall be by them respectively received for duties on patents, and for copies of records and drawings, and all other moneys received by virtue of said office.

A seal to be provided.

SEC. 4. *And be it further enacted*, That the said Commissioner shall cause a seal to be made and provided for the said office, with such device as the President of the United States shall approve; and copies of any records, books, papers, or drawings, belonging to the said office, under the signature of the said Commissioner, or, when the office shall be vacant, under the signature of the Chief Clerk, with the said seal affixed, shall be competent evidence in all cases in which the original records, books, papers, or drawings could be evidence. And any person making application therefor may have certified copies of the records, drawings, and other papers deposited in said

office, on paying, for the written copies, the sum of ten cents for every page of one hundred words; and for copies of drawings, the reasonable expense of making the same.

SEC. 5. *And be it further enacted,* That all patents issued from said office shall be issued in the name of the United States, and under the seal of said office, and be signed by the Secretary of State, and countersigned by the Commissioner of the said office, and shall be recorded, together with the descriptions, specifications, and drawings, in the said office, in books to be kept for that purpose. Every such patent shall contain a short description or title of the invention or discovery, correctly indicating its nature and design, and in its terms grant to the applicant or applicants, his or their heirs, administrators, executors, or assigns, for a term not exceeding fourteen years, the full and exclusive right and liberty of making, using, and vending to others to be used, the said invention or discovery, referring to the specifications for the particulars thereof, a copy of which shall be annexed to the patent, specifying what the patentee claims as his invention or discovery.

Patents to be signed by the Secretary of State, and by the Commissioner.

SEC. 6. *And be it further enacted,* That any person or persons having discovered or invented any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvements on any art, machine, manufacture, or composition of matter, not known or used by others before his or their discovery or invention thereof, and not, at the time of his application for a patent, in public use or on sale, with his consent or allowance, as the inventor or discoverer, and shall desire to obtain an exclusive property therein, may make application, in writing, to the Commissioner of Patents, expressing such desire, and the Commissioner, on due proceedings had, may grant a patent therefor. But before any inventor shall receive a patent for any such new invention or discovery, he shall deliver a written description of his invention or discovery, and of the manner and process of making, constructing, using, and compounding the same, in such full, clear, and exact terms, avoiding unnecessary prolixity, as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound, and use the same; and in case of any machine, he shall fully explain the principle, and the several modes in which he has contemplated the application of that principle or character by which it may be distinguished from other inventions; and shall particularly specify and point out the part, improvement, or combination, which he claims as his own invention or discovery. He shall, furthermore, accompany the whole with a drawing or drawings, and written references, where the nature of the case admits of drawings; or with specimens of ingredients, and of the composition of matter, sufficient in quantity for the purpose of experiment, where the invention or discovery is of a composition of matter; which descriptions and drawings, signed by the inventor, and attested

Applications, how made.

Specification.

Drawings, &c

Models.

Oath or affirmation.

Examination of invention to be made, and proceedings thereon, should it not be deemed new.

by two witnesses, shall be filed in the Patent Office; and he shall, moreover, furnish a model of his invention, in all cases which admit of a representation by model, of a convenient size to exhibit advantageously its several parts. The applicant shall also make oath, or affirmation, that he does verily believe that he is the original and first inventor or discoverer of the art, machine, composition, or improvement, for which he solicits a patent, and that he does not know or believe that the same was ever before known or used; and also of what country he is a citizen; which oath or affirmation may be made before any person authorized by law to administer oaths.

SEC. 7. *And be it further enacted*, That on the filing of any such application, description, and specification, and the payment of the duty hereinafter provided, the Commissioner shall make, or cause to be made, an examination of the alleged new invention or discovery; and if, on any such examination, it shall not appear to the Commissioner that the same had been invented or discovered by any other person in this country, prior to the alleged invention or discovery thereof by the applicant, or that it had been patented or described in any printed publication in this or any foreign country, or had been in public use or on sale, with the applicant's consent or allowance, prior to the application, if the Commissioner shall deem it to be sufficiently useful and important, it shall be his duty to issue a patent therefor. But whenever, on such examination, it shall appear to the Commissioner that the applicant was not the original and first inventor or discoverer thereof, or that any part of that which is claimed as new had before been invented or discovered, or patented, or described in any printed publication in this or any foreign country as aforesaid, or that the description is defective and insufficient, he shall notify the applicant thereof, giving him briefly such information and references as may be useful in judging of the propriety of renewing his application, or of altering his specification to embrace only that part of the invention or discovery which is new. In every such case, if the applicant shall elect to withdraw his application, relinquishing his claim to the model, he shall be entitled to receive back twenty dollars, part of the duty required by this act, on filing a notice in writing of such election in the Patent Office, a copy of which, certified by the Commissioner, shall be a sufficient warrant to the Treasurer for paying back to the said applicant the said sum of twenty dollars. But if the applicant, in such case, shall persist in his claim for a patent, with or without any alteration of his specification, he shall be required to make oath or affirmation anew, in manner as aforesaid; and if the specification and claim shall not have been so modified as, in the opinion of the Commissioner, shall entitle the applicant to a patent, he may, on appeal, and upon request in writing, have the decision of a board of examiners, to be composed of three disinterested persons, who shall be appointed for that purpose by the Secretary of State, one of whom, at least, to be selected, if practicable and convenient, for his knowledge and

skill in the particular art, manufacture, or branch of science to which the alleged invention appertains; who shall be under oath or affirmation for the faithful and impartial performance of the duty imposed upon them by said appointment. Said board shall be furnished with a certificate in writing of the opinion and decision of the Commissioner, stating the particular grounds of his objection, and the part or parts of the invention which he considers as not entitled to be patented. And the said board shall give reasonable notice to the applicant, as well as to the Commissioner, of the time and place of their meeting, that they may have an opportunity of furnishing them with such facts and evidence as they may deem necessary to a just decision; and it shall be the duty of the Commissioner to furnish to the board of examiners such information as he may possess relative to the matter under their consideration. And on an examination and consideration of the matter by such board, it shall be in their power, or of a majority of them, to reverse the decision of the Commissioner, either in whole or in part; and their opinion being certified to the Commissioner, he shall be governed thereby in the further proceedings to be had on such application: *Provided, however,* That, before a board shall be instituted in any such case, the applicant shall pay to the credit of the Treasury, as provided in the ninth section of this act, the sum of twenty-five dollars, and each of said persons so appointed shall be entitled to receive for his services in each case a sum not exceeding ten dollars, to be determined and paid by the Commissioner out of any moneys in his hands, which shall be in full compensation to the persons who may be so appointed, for their examination and certificate as aforesaid.

Proviso.

SEC. 8. *And be it further enacted,* That whenever an application shall be made for a patent which, in the opinion of the Commissioner, would interfere with any other patent for which an application may be pending, or with any unexpired patent which shall have been granted, it shall be the duty of the Commissioner to give notice thereof to such applicants, or patentees, as the case may be; and if either shall be dissatisfied with the decision of the Commissioner on the question of priority of right or invention, on a hearing thereof, he may appeal from such decision, on the like terms and conditions as are provided in the preceding section of this act; and the like proceedings shall be had, to determine which or whether either of the applicants is entitled to receive a patent as prayed for. But nothing in this act contained shall be construed to deprive an original and true inventor of the right to a patent for his invention, by reason of his having previously taken out letters patent therefor in a foreign country, and the same having been published, at any time within six months next preceding the filing of his specification and drawings. And whenever the applicant shall request it, the patent shall take date from the time of the filing of the specification and drawings, not however exceeding six months prior to the actual issuing of the patent;

Interfering applications.

and on like request, and the payment of the duty herein required, by any applicant, his specification and drawings shall be filed in the secret archives of the office until he shall furnish the model and the patent be issued, not exceeding the term of one year, the applicant being entitled to notice of interfering applications.

Thirty dollars to be paid to the credit of the U. S. Treasurer by a citizen, or, &c.

SEC. 9. *And be it further enacted*, That before any application for a patent shall be considered by the Commissioner as aforesaid, the applicant shall pay into the Treasury of the United States, or into the Patent Office, or into any of the deposit banks to the credit of the Treasury, if he be a citizen of the United States, or an alien, and shall have been resident in the United States for one year next preceding, and shall have made oath of his intention to become a citizen thereof, the sum of thirty dollars; if a subject of the King of Great Britain, the sum of five hundred dollars; and all other persons the sum of three hundred dollars; for which payment duplicate receipts shall be taken, one of which to be filed in the office of the Treasurer. And the moneys received into the Treasury under this act shall constitute a fund for the payment of the salaries of the officers and clerks herein provided for, and all other expenses of the Patent Office, and to be called the Patent Fund.

Five hundred dollars by a subject of Great Britain, and three hundred by other persons.

Inventors dying without taking a patent, their executors, &c., may, &c.

SEC. 10. *And be it further enacted*, That where any person hath made, or shall have made; any new invention, discovery, or improvement, on account of which a patent might by virtue of this act be granted, and such person shall die before any patent shall be granted therefor, the right of applying for and obtaining such patent shall devolve on the executor or administrator of such person, in trust for the heirs-at-law of the deceased, in case he shall have died intestate; but if otherwise, then in trust for his devisees, in as full and ample manner, and under the same conditions, limitations, and restrictions, as the same was held, or might have been claimed or enjoyed by such person in his or her lifetime; and when application for a patent shall be made by such legal representatives, the oath or affirmation provided in the 6th section of this act shall be so varied as to be applicable to them.

Assignment of a patent, and record thereof.

SEC. 11. *And be it further enacted*, That every patent shall be assignable in law, either as to the whole interest, or any undivided part thereof, by any instrument in writing; which assignment, and also every grant and conveyance of the exclusive right under any patent, to make and use, and to grant to others to make and use, the thing patented within and throughout any specified part or portion of the United States, shall be recorded in the Patent Office within three months from the execution thereof, for which the assignee or grantee shall pay to the Commissioner the sum of three dollars.

Caveat may be entered.

SEC. 12. *And be it further enacted*, That any citizen of the United States, or alien, who shall have been resident in the United States one year next preceding, and shall have

made oath of his intention to become a citizen thereof, who shall have invented any new art, machine, or improvement thereof, and shall desire further time to mature the same, may, on paying to the credit of the Treasury, in manner as provided in the ninth section of this act, the sum of twenty dollars, file in the Patent Office a caveat, setting forth the design and purpose thereof, and its principal and distinguishing characteristics, and praying protection of his right till he shall have matured his invention; which sum of twenty dollars, in case the person filing such caveat shall afterwards take out a patent for the invention therein mentioned, shall be considered a part of the sum herein required for the same. And such caveat shall be filed in the confidential archives of the office, and preserved in secrecy. And if application shall be made by any other person, within one year from the time of filing such caveat, for a patent of any invention with which it may in any respect interfere, it shall be the duty of the Commissioner to deposite the description, specifications, drawings, and model, in the confidential archives of the office, and to give notice (by mail) to the person filing the caveat, of such application, who shall, within three months after receiving the notice, if he would avail himself of the benefit of his caveat, file his description, specifications, drawings, and model; and if, in the opinion of the Commissioner, the specifications of claim interfere with each other, like proceedings may be had in all respects as are in this act provided in the case of interfering applications. *Provided, however,* That no opinion or decision of any board of examiners, under the provisions of this act, shall preclude any person interested in favor of or against the validity of any patent which has been or may hereafter be granted, from the right to contest the same in any judicial court, in any action in which its validity may come in question.

Proviso.

SEC. 13. *And be it further enacted,* That whenever any patent which has heretofore been granted, or which shall hereafter be granted, shall be inoperative, or invalid, by reason of a defective or insufficient description or specification, or by reason of the patentee claiming in his specification as his own invention, more than he had or shall have a right to claim as new; if the error has, or shall have arisen by inadvertency, accident, or mistake, and without any fraudulent or deceptive intention, it shall be lawful for the Commissioner, upon the surrender to him of such patent, and the payment of the further duty of fifteen dollars, to cause a new patent to be issued to the said inventor, for the same invention, for the residue of the period then unexpired for which the original patent was granted, in accordance with the patentee's corrected description and specification. And in case of his death, or any assignment by him made of the original patent, a similar right shall vest in his executors, administrators, or assignees. And the patent, so re-issued, together with the corrected description and specification, shall have the same ef-

Patents invalid from defective specifications may be surrendered, and new patents may be issued in certain cases.

fect and operation in law, on the trial of all actions hereafter commenced for causes subsequently accruing, as though the same had been originally filed in such corrected form, before the issuing out of the original patent. And whenever the original patentee shall be desirous of adding the description and specification of any new improvement of the original invention or discovery, which shall have been invented or discovered by him subsequent to the date of his patent, he may, like proceedings being had in all respects as in the case of original applications, and on the payment of fifteen dollars, as hereinbefore provided, have the same annexed to the original description and specification; and the Commissioner shall certify, on the margin of such annexed description and specification, the time of its being annexed and recorded; and the same shall thereafter have the same effect in law, to all intents and purposes, as though it had been embraced in the original description and specification.

Patentee may make additions to his patent.

Court may render judgment for a sum not exceeding three times the amount of actual damages.

SEC. 14. *And be it further enacted*, That whenever, in any action for damages for making, using, or selling the thing whereof the exclusive right is secured by any patent heretofore granted, or by any patent which may hereafter be granted, a verdict shall be rendered for the plaintiff in such action, it shall be in the power of the court to render judgment for any sum above the amount found by such verdict as the actual damages sustained by the plaintiff, not exceeding three times the amount thereof, according to the circumstances of the case, with costs; and such damages may be recovered by action on the case, in any court of competent jurisdiction, to be brought in the name or names of the person or persons interested, whether as patentees, assignees, or as grantees of the exclusive right within and throughout a specified part of the United States.

Defendant may plead the general issue, &c.

SEC. 15. *And be it further enacted*, That the defendant in any such action shall be permitted to plead the general issue, and to give this act and any special matter in evidence, of which notice in writing may have been given to the plaintiff or his attorney, thirty days before trial, tending to prove that the description and specification filed by plaintiff, does not contain the whole truth relative to his invention or discovery, or that it contains more than is necessary to produce the described effect; which concealment or addition shall fully appear to have been made for the purpose of deceiving the public, or that the patentee was not the original and first inventor or discoverer of the thing patented, or of a substantial and material part thereof claimed as new, or that it had been described in some public work anterior to the supposed discovery thereof by the patentee, or had been in public use or on sale with the consent and allowance of the patentee before his application for a patent, or that he had surreptitiously or unjustly obtained the patent for that which was in fact invented or discovered by another, who was using reasonable diligence in adapting and perfecting the same; or that the patentee, if an alien at the time the

patent was granted, had failed and neglected, for the space of eighteen months from the date of the patent, to put and continue on sale to the public, on reasonable terms, the invention or discovery for which the patent issued; in either of which cases, judgment shall be rendered for the defendant, with costs. And whenever the defendant relies in his defence on the fact of a previous invention, knowledge, or use of the thing patented, he shall state, in his notice of special matter, the names and places of residence of those whom he intends to prove to have possessed a prior knowledge of the thing, and where the same had been used: *Provided, however*, That whenever it shall satisfactorily appear that the patentee, at the time of making his application for the patent, believed himself to be the first inventor or discoverer of the thing patented, the same shall not be held to be void on account of the invention or discovery or any part thereof having been before known or used in any foreign country, it not appearing that the same or a substantial part thereof had before been patented or described in any printed publication: *And provided, also*, That whenever the plaintiff shall fail to sustain his action on the ground that in his specification of claim is embraced more than that of which he was the first inventor, if it shall appear that the defendant had used or violated any part of the invention justly and truly specified and claimed as new, it shall be in the power of the court to adjudge and award, as to costs, as may appear to be just and equitable.

Proviso.

Proviso.

Interfering patents, &c.

SEC. 16. *And be it further enacted*, That whenever there shall be two interfering patents, or whenever a patent on application shall have been refused on an adverse decision of a board of examiners, on the ground that the patent applied for would interfere with an unexpired patent previously granted, any person interested in any such patent, either by assignment or otherwise, in the one case, and any such applicant in the other case, may have remedy by bill in equity; and the court having cognizance thereof, on notice to adverse parties and other due proceedings had, may adjudge and declare either the patents void in the whole or in part, or inoperative and invalid in any particular part or portion of the United States, according to the interest which the parties to such suit may possess in the patent or the inventions patented, and may also adjudge that such applicant is entitled, according to the principles and provisions of this act, to have and receive a patent for his invention, as specified in his claim, or for any part thereof, as the fact of priority of right or invention shall in any such case be made to appear. And such adjudication, if it be in favor of the right of such applicant, shall authorize the Commissioner to issue such patent, on his filing a copy of the adjudication, and otherwise complying with the requisitions of this act: *Provided, however*, That no such judgment or adjudication shall affect the rights of any person, except the parties to the action, and those deriving title from or under them subsequent to the rendition of such judgment.

Proviso.

Actions cognizable in circuit courts of United States, &c.

SEC. 17. *And be it further enacted*, That all actions, suits, controversies, and cases arising under any law of the United States, granting or confirming to inventors the exclusive right to their inventions or discoveries, shall be originally cognizable, as well in equity as at law, by the circuit courts of the United States, or any district court having the powers and jurisdiction of a circuit court; which courts shall have power, upon bill in equity filed by any party aggrieved, in any such case, to grant injunctions, according to the course and principles of courts of equity, to prevent the violation of the rights of any inventor as secured to him by any law of the United States, on such terms and conditions as said courts may deem reasonable: *Provided, however*, 'That from all judgments and decrees, from any such court rendered in the premises, a writ of error or appeal, as the case may require, shall lie to the Supreme Court of the United States, in the same manner and under the same circumstances as is now provided by law in other judgments and decrees of circuit courts, and in all other cases in which the court shall deem it reasonable to allow the same.

Previous.

Patents may be extended seven years in certain cases.

SEC. 18. *And be it further enacted*, That whenever any patentee of an invention or discovery shall desire an extension of his patent beyond the term of its limitation, he may make application therefor, in writing, to the Commissioner of the Patent Office, setting forth the grounds thereof; and the Commissioner shall, on the applicant's paying the sum of forty dollars to the credit of the Treasury, as in the case of an original application for a patent, cause to be published, in one or more of the principal newspapers in the city of Washington, and in such other paper or papers as he may deem proper, published in the section of country most interested adversely to the extension of the patent, a notice of such application and of the time and place when and where the same will be considered, that any person may appear and show cause why the extension should not be granted. And the Secretary of State, the Commissioner of the Patent Office, and the Solicitor of the Treasury, shall constitute a board to hear and decide upon the evidence produced before them both for and against the extension, and shall sit for that purpose at the time and place designated in the published notice thereof. The patentee shall furnish to said board a statement, in writing, under oath, of the ascertained value of the invention, and of his receipts and expenditures, sufficiently in detail to exhibit a true and faithful account of loss and profit in any manner accruing to him from and by reason of said invention. And if, upon a hearing of the matter, it shall appear to the full and entire satisfaction of said board, having due regard to the public interest therein, that it is just and proper that the term of the patent should be extended, by reason of the patentee, without neglect or fault on his part, having failed to obtain, from the use and sale of his invention, a reasonable remuneration for the time, ingenuity, and expense bestowed upon the same, and the introduction

thereof into use, it shall be the duty of the Commissioner to renew and extend the patent, by making a certificate thereon of such extension, for the term of seven years from and after the expiration of the first term; which certificate, with a certificate of said board of their judgment and opinion as aforesaid, shall be entered on record in the Patent Office; and thereupon the said patent shall have the same effect in law as though it had been originally granted for the term of twenty-one years; and the benefit of such renewal shall extend to assignees and grantees of the right to use the thing patented, to the extent of their respective interest therein: *Provided, however*, That no extension of a patent shall be granted after the expiration of the term for which it was originally issued.

Proviso.

SEC. 19. *And be it further enacted*, That there shall be provided, for the use of said office, a library of scientific works and periodical publications, both foreign and American, calculated to facilitate the discharge of the duties hereby required of the chief officers therein, to be purchased under the direction of the Committee of the Library of Congress. And the sum of fifteen hundred dollars is hereby appropriated, for that purpose, to be paid out of the Patent fund.

Library of Patent Office.

SEC. 20. *And be it further enacted*, That it shall be the duty of the Commissioner to cause to be classified and arranged, in such rooms or galleries as may be provided for that purpose, in suitable cases, when necessary for their preservation, and in such manner as shall be conducive to a beneficial and favorable display thereof, the models and specimens of compositions and of fabrics and other manufactures and works of art, patented or unpatented, which have been, or shall hereafter be deposited in said office. And said rooms or galleries shall be kept open during suitable hours for public inspection.

Models to be classified and arranged.

SEC. 21. *And be it further enacted*, That all acts and parts of acts heretofore passed on this subject, be, and the same are hereby repealed: *Provided, however*, That all actions and processes in law or equity sued out prior to the passage of this act, may be prosecuted to final judgment and execution, in the same manner as though this act had not been passed, excepting and saving the application to any such action, of the provisions of the fourteenth and fifteenth sections of this act, so far as they may be applicable thereto: *And provided, also*, That all applications or petitions for patents, pending at the time of the passage of this act, in cases where the duty has been paid, shall be proceeded with and acted on in the same manner as though filed after the passage hereof.

Former acts repealed.

Proviso.

Proviso.

Approved July 4, 1836.

CHAP. XLV.—*An Act in addition to the act to promote the progress of science and useful arts.*

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That any person who may be in possession of, or in any way inter-

Patents issued, and assignments executed and recorded prior to 15th December,

1836, may be recorded anew, &c.

Measures to be taken to obtain patents, &c., to be recorded, &c.

Clerks of the judicial courts, U. S., to transmit statements of authenticated copies of patents, &c., prior to 15th December, 1836, &c.

Certified copies of such record, &c., to be evidence in any judicial court U. S., &c.

No patent, &c., issued, &c., prior to 15th December, 1836, to be received in evidence in said courts after 1st June next, unless recorded anew.

ested in, any patent for an invention, discovery, or improvement, issued prior to the fifteenth day of December, in the year of our Lord one thousand eight hundred and thirty-six, or in an assignment of any patent, or interest therein, executed and recorded prior to the said fifteenth day of December, may, without charge, on presentation or transmission thereof to the Commissioner of Patents, have the same recorded anew in the Patent Office, together with the descriptions, specifications of claim and drawings annexed or belonging to the same; and it shall be the duty of the Commissioner to cause the same, or any authenticated copy of the original record, specification, or drawing which he may obtain, to be transcribed and copied into books of record to be kept for that purpose; and wherever a drawing was not originally annexed to the patent and referred to in the specification, any drawing produced as a delineation of the invention, being verified by oath in such manner as the Commissioner shall require, may be transmitted and placed on file or copied as aforesaid, together with certificate of the oath; or such drawings may be made in the office, under the direction of the Commissioner, in conformity with the specification. And it shall be the duty of the Commissioner to take such measures as may be advised and determined by the Board of Commissioners provided for in the fourth section of this act, to obtain the patents, specifications, and copies aforesaid, for the purpose of being so transcribed and recorded. And it shall be the duty of each of the several clerks of the judicial courts of the United States, to transmit, as soon as may be, to the Commissioner of the Patent Office, a statement of all the authenticated copies of patents, descriptions, specifications, and drawings of inventions and discoveries made and executed prior to the aforesaid fifteenth day of December, which may be found on the files of his office; and also to make out and transmit to said Commissioner, for record as aforesaid, a certified copy of every such patent, description, specification, or drawing, which shall be specially required by said Commissioner.

SEC. 2. *And be it further enacted*, That copies of such record and drawings, certified by the Commissioner, or, in his absence, by the chief clerk, shall be prima facie evidence of the particulars of the invention and of the patent granted therefor in any judicial court of the United States, in all cases where copies of the original record or specification and drawings would be evidence, without proof of the loss of such originals; and no patent issued prior to the aforesaid fifteenth day of December shall, after the first day of June next, be received in evidence in any of the said courts in behalf of the patentee or other person who shall be in possession of the same, unless it shall have been so recorded anew, and a drawing of the invention, if separate from the patent, verified as aforesaid, deposited in the Patent Office; nor shall any written assignment of any such patent, executed and recorded prior to the said fifteenth day of December, be received in evidence in any

of the said courts in behalf of the assignee or other person in possession thereof, until it shall have been so recorded anew.

SEC. 3. *And be it further enacted*, That whenever it shall appear to the Commissioner that any patent was destroyed by the burning of the Patent Office building on the aforesaid fifteenth day of December, or was otherwise lost prior thereto, it shall be his duty, on application therefor by the patentee or other person interested therein, to issue a new patent for the same invention or discovery, bearing the date of the original patent, with his certificate thereon that it was made and issued pursuant to the provisions of the third section of this act, and shall enter the same of record: *Provided, however*, That before such patent shall be issued, the applicant therefor shall deposit in the Patent Office a duplicate, as near as may be, of the original model, drawings, and description, with specification of the invention or discovery, verified by oath, as shall be required by the Commissioner; and such patent and copies of such drawings and description, duly certified, shall be admissible as evidence in any judicial court of the United States, and shall protect the rights of the patentee, his administrators, heirs, and assigns, to the extent only in which they would have been protected by the original patent and specification.

New Patents to be issued for those lost or destroyed on or before 15th December, 1833.

Proviso.

SEC. 4. *And be it further enacted*, That it shall be the duty of the Commissioner to procure a duplicate of such of the models destroyed by fire on the aforesaid fifteenth day of December, as were most valuable and interesting, and whose preservation would be important to the public; and such as would be necessary to facilitate the just discharge of the duties imposed by law on the Commissioner in issuing patents, and to protect the rights of the public and of patentees in patented inventions and improvements: *Provided*, That a duplicate of such models may be obtained at a reasonable expense: *And provided, also*, That the whole amount of expenditure for this purpose shall not exceed the sum of one hundred thousand dollars. And there shall be a temporary board of commissioners, to be composed of the Commissioner of the Patent Office and two other persons to be appointed by the President, whose duty it shall be to consider and determine upon the best and most judicious mode of obtaining models of suitable construction; and, also, to consider and determine what models may be procured in pursuance of, and in accordance with, the provisions and limitations in this section contained. And said Commissioners may make and establish all such regulations, terms, and conditions, not inconsistent with law, as in their opinion may be proper and necessary to carry the provisions of this section into effect, according to its true intent.

Duplicates of certain models to be procured.

Proviso.

Further proviso.

A temporary board of commissioners to be appointed; their duties.

SEC. 5. *And be it further enacted*, That, whenever a patent shall be returned for correction and re-issue under the thirteenth section of the act to which this is additional, and the patentee shall desire several patents to be issued for distinct and

Patents returned for correction, &c., under 13th section of act to which this is additional, &c.

Act of 1836,
ch. 367.

Previus.

No addition, &c.
to be made to any
patent heretofore
granted, &c., un-
til a verified du-
plicate model, &c.,
is deposited, &c.

Compensation
for models, &c.

Patents hereaf-
ter to be issued.

Whenever any
patentee shall,
through inadvert-
tence, &c., make
his specification
too broad, &c.,
he, &c., may
make disclaimer,
&c.

separate parts of the thing patented, he shall first pay, in man-
ner and in addition to the sum provided by that act, the sum of
thirty dollars for each additional patent so to be issued: *Pro-
vided, however,* That no patent made prior to the aforesaid
fifteenth day of December, shall be corrected and re-issued un-
til a duplicate of the model and drawing of the thing as
originally invented, verified by oath as shall be required by the
Commissioner, shall be deposited in the Patent Office; nor
shall any addition of an improvement be made to any patent
heretofore granted, nor any new patent be issued for an im-
provement made in any machine, manufacture, or process, to
the original inventor, assignee, or possessor, of a patent therefor,
nor any disclaimer be admitted to record until a duplicate
model and drawing of the thing originally intended, verified as
aforesaid, shall have been deposited in the Patent Office, if the
Commissioner shall require the same; nor shall any patent be
granted for an invention, improvement, or discovery, the model
or drawing of which shall have been lost, until another model
and drawing, if required by the Commissioner, shall, in like
manner, be deposited in the Patent Office; and in all such
cases, as well as in those which may arise under the third sec-
tion of this act, the question of compensation for such models
and drawings shall be subject to the judgment and decision of
the Commissioners provided for in the fourth section, under the
same limitations and restrictions as are therein prescribed.

SEC. 6. *And be it further enacted,* That any patent
hereafter to be issued, may be made and issued to the assignee
or assignees of the inventor or discoverer, the assignment there-
of being first entered of record, and the application therefor
being duly made, and the specification duly sworn to by the
inventor. And in all cases hereafter, the applicant for a patent
shall be held to furnish duplicate drawings, whenever the case
admits of drawings, one of which to be deposited in the office,
and the other to be annexed to the patent, and considered a
part of the specification.

SEC. 7. *And be it further enacted,* That, whenever any pat-
entee shall have, through inadvertence, accident, or mistake,
made his specification of claim too broad, claiming more than
that of which he was the original or first inventor, some material
and substantial part of the thing patented being truly and justly
his own, any such patentee, his administrators, executors, and as-
signs, whether of the whole or of a sectional interest therein, may
make disclaimer of such parts of the thing patented as the dis-
claimant shall not claim to hold by virtue of the patent or as-
signment, stating therein the extent of his interest in such patent;
which disclaimer shall be in writing, attested by one or more
witnesses, and recorded in the Patent Office, on payment by
the person disclaiming, in manner as other patent duties are
required by law to be paid, of the sum of ten dollars. And
such disclaimer shall thereafter be taken and considered as part
of the original specification, to the extent of the interest which

shall be possessed in the patent or right secured thereby, by the disclaimant, and by those claiming by or under him subsequent to the record thereof. But no such disclaimer shall affect any action pending at the time of its being filed, except so far as may relate to the question of unreasonable neglect or delay in filing the same.

SEC. 8. *And be it further enacted*, That, whenever application shall be made to the Commissioner for any addition of a newly discovered improvement to be made to an existing patent, or whenever a patent shall be returned for correction and re-issue, the specification of claim annexed to every such patent shall be subject to revision and restriction, in the same manner as are original applications for patents; the Commissioner shall not add any such improvement to the patent in the one case, nor grant the re-issue in the other case, until the applicant shall have entered a disclaimer, or altered his specification of claim in accordance with the decision of the Commissioner; and in all such cases, the applicant, if dissatisfied with such decision, shall have the same remedy, and be entitled to the benefit of the same privileges and proceedings, as are provided by law in the case of original applications for patents.

Applications for additions to newly discovered improvements to be made to existing patents, &c.

SEC. 9. *And be it further enacted*, (any thing in the fifteenth section of the act to which this is additional to the contrary notwithstanding,) That, whenever by mistake, accident, or inadvertence, and without any wilful default or intent to defraud or mislead the public, any patentee shall have in his specification claimed to be the original and first inventor or discoverer of any material or substantial part of the thing patented, of which he was not the first and original inventor, and shall have no legal or just right to claim the same, in every such case the patent shall be deemed good and valid for so much of the invention or discovery as shall be truly and bona fide his own: *Provided*, It shall be a material and substantial part of the thing patented, and be definitively distinguishable from the other parts so claimed without right as aforesaid. And every such patentee, his executors, administrators, and assigns, whether of a whole or of a sectional interest therein, shall be entitled to maintain a suit at law or in equity on such patent for any infringement of such part of the invention or discovery as shall be bona fide his own as aforesaid, notwithstanding the specification may embrace more than he shall have any legal right to claim. But, in every such case in which a judgment or verdict shall be rendered for the plaintiff, he shall not be entitled to recover costs against the defendant, unless he shall have entered at the Patent Office, prior to the commencement of the suit, a disclaimer of all that part of the thing patented which was so claimed without right: *Provided, however*, That no person bringing any such suit shall be entitled to the benefits of the provisions contained in this section, who shall have unreasonably neglected or delayed to enter at the Patent Office a disclaimer as aforesaid.

When by mistake, &c., any patentee claims to be the original inventor of part of the thing patented, of which he was not, &c.

Proviso.

Further proviso.

Agents to be appointed to receive and forward models, &c.

SEC. 10. *And be it further enacted*, That the Commissioner is hereby authorized and empowered to appoint agents in not exceeding twenty of the principal cities or towns in the United States as may best accommodate the different sections of the country, for the purpose of receiving and forwarding to the Patent Office all such models, specimens of ingredients, and manufactures, as shall be intended to be patented or deposited therein, the transportation of the same to be chargeable to the Patent fund.

Two examining and one copying clerk to be appointed.

SEC. 11. *And be it further enacted*, That instead of one examining clerk, as provided by the second section of the act to which this is additional, there shall be appointed, in manner therein provided, two examining clerks, each to receive an annual salary of fifteen hundred dollars; and also, an additional copying clerk, at an annual salary of eight hundred dollars. And the Commissioner is also authorized to employ, from time to time, as many temporary clerks as may be necessary to execute the copying and draughting required by the first section of this act, and to examine and compare the records with the originals, who shall receive not exceeding seven cents for every page of one hundred words, and for drawings and comparison of records with originals, such reasonable compensation as shall be agreed upon or prescribed by the Commissioner.

Temporary clerks may be employed.

Certificate of the commissioner to be sufficient warrant to the Treasurer.

SEC. 12. *And be it further enacted*, That whenever the application of any foreigner for a patent shall be rejected and withdrawn for want of novelty in the invention, pursuant to the seventh section of the act to which this is additional, the certificate thereof of the Commissioner shall be a sufficient warrant to the Treasurer to pay back to such applicant two-thirds of the duty he shall have paid into the Treasury on account of such application.

Affirmation may be substituted for an oath.

SEC. 13. *And be it further enacted*, That in all cases in which an oath is required by this act, or by the act to which this is additional, if the person of whom it is required shall be conscientiously scrupulous of taking an oath, affirmation may be substituted therefor.

Moneys paid into the Treasury for patents, &c., prior to passage of act to which this is additional, to be carried to credit of patent fund created by said act; and said fund appropriated for salaries, &c.

SEC. 14. *And be it further enacted*, That all moneys paid into the Treasury of the United States for patents and for fees for copies furnished by the Superintendent of the Patent Office prior to the passage of the act to which this is additional, shall be carried to the credit of the Patent fund created by said act; and the moneys constituting said fund shall be, and the same are hereby, appropriated for the payment of the salaries of the officers and clerks provided for by said act, and all other expenses of the Patent Office, including all the expenditures provided for by this act; and, also, for such other purposes as are or may be hereafter specially provided for by law. And the Commissioner is hereby authorized to draw upon said fund, from time to time, for such sums as shall be necessary to carry into effect the provisions of this act, governed, however, by the

Commissioner authorized to draw upon same, &c.; and lay before Congress an-

several limitations herein contained. And it shall be his duty to lay before Congress, in the month of January, annually, a detailed statement of the expenditures and payments by him made from said fund. And it shall also be his duty to lay before Congress, in the month of January, annually, a list of all patents which shall have been granted during the preceding year, designating, under proper heads, the subjects of such patents, and furnishing an alphabetical list of the patentees, with their places of residence; and he shall also furnish a list of all patents which shall have become public property during the same period; together with such other information of the state and condition of the Patent Office as may be useful to Congress or to the public.

Approved, March 3d, 1837.

CHAP. LXXXVIII.—*An Act in addition to "An Act to promote the progress of Useful Arts."*

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be appointed, in manner provided in the second section of the act to which this is additional, two assistant examiners, each to receive an annual salary of twelve hundred and fifty dollars.

usually a statement of expenditures, &c.; and, also, a list of patents, &c.

Act of July 4, 1836, ch. 357.
Act of Aug. 29, 1842, ch. 363.
Two assistant examiners to be appointed—how their salaries.

SEC. 2. *And be it further enacted, That the Commissioner be authorized to employ temporary clerks to do any necessary transcribing, whenever the current business of the office requires it: Provided, however, That instead of salary, a compensation shall be allowed, at a rate not greater than is charged for copies now furnished by the office.*

Temporary clerks.

Proviso.

SEC. 3. *And be it further enacted, That the Commissioner is hereby authorized to publish a classified and alphabetical list of all patents granted by the Patent Office previous to said publication, and retain one hundred copies for the Patent Office, and nine hundred copies to be deposited in the library of Congress, for such distribution as may be hereafter directed; and that one thousand dollars, if necessary, be appropriated, out of the Patent fund, to defray the expense of the same.*

List of patents to be published.

SEC. 4. *And be it further enacted, That the sum of three thousand six hundred and fifty-nine dollars and twenty-two cents be, and is hereby, appropriated from the Patent fund, to pay for the use and occupation of rooms in the City Hall by the Patent Office.*

Pay for use of rooms in City Hall.

SEC. 5. *And be it further enacted, That the sum of one thousand dollars be appropriated from the Patent fund, to be expended under the direction of the Commissioner, for the purchase of necessary books for the library of the Patent Office.*

Purchase of books.

SEC. 6. *And be it further enacted, That no person shall be debarred from receiving a patent for any invention or discovery, as provided in the act approved on the fourth day of July, one thousand eight hundred and thirty-six, to which this is addi-*

No person to be debarred from receiving a patent, &c.

Proviso.

Proviso.

Persons, &c.,
having purchased
or constructed
any newly in-
vented machine,
&c.

tional, by reason of the same having been patented in a foreign country more than six months prior to his application: *Provided*, That the same shall not have been introduced into public and common use in the United States prior to the application for such patent: *And provided, also*, That in all cases every such patent shall be limited to the term of fourteen years from the date of publication of such foreign letters patent.

SEC. 7. *And be it further enacted*, That every person or corporation who has, or shall have, purchased or constructed any newly invented machine, manufacture, or composition of matter, prior to the application by the inventor or discoverer for a patent, shall be held to possess the right to use, and vend to others to be used, the specific machine, manufacture, or composition of matter so made or purchased, without liability therefor to the inventor, or any other person interested in such invention; and no patent shall be held to be invalid by reason of such purchase, sale, or use prior to the application for a patent as aforesaid, except on proof of abandonment of such invention to the public; or that such purchase, sale, or prior use has been for more than two years prior to such application for a patent.

So much of 11th
sec. act 4th July,
1838, ch. 357, as
requires payment
for recording as-
signments, re-
pealed.

SEC. 8. *And be it further enacted*, That so much of the eleventh section of the above recited act as requires the payment of three dollars to the Commissioner of Patents for recording any assignment, grant, or conveyance of the whole or any part of the interest or right under any patent, be, and the same is hereby repealed; and all such assignments, grants, and conveyances shall, in future, be recorded without any charge whatever.

Agricultural sta-
tistics, &c.

SEC. 9. *And be it further enacted*, That a sum of money, not exceeding one thousand dollars, be, and the same is hereby, appropriated out of the Patent fund, to be expended by the Commissioner of Patents in the collection of agricultural statistics, and for other agricultural purposes; for which the said Commissioner shall account in his next annual report.

Provisions 16th
sec. act 4th July,
1838, ch. 357, ex-
tended.

SEC. 10. *And be it further enacted*, That the provisions of the sixteenth section of the before recited act shall extend to all cases where patents are refused for any reason whatever, either by the Commissioner of Patents or by the Chief Justice of the District of Columbia, upon appeals from the decision of said Commissioner, as well as where the same shall have been refused on account of, or by reason of, interference with a previously existing patent; and in all cases where there is no opposing party, a copy of the bill shall be served upon the Commissioner of Patents, when the whole of the expenses of the proceeding shall be paid by the applicant, whether the final decision shall be in his favor or otherwise.

Appeals.

SEC. 11. *And be it further enacted*, That in all cases where an appeal is now allowed by law from the decision of the Commissioner of Patents to a board of examiners provided for in the seventh section of the act to which this is additional, the

party, instead thereof, shall have a right to appeal to the Chief Justice of the district court of the United States for the District of Columbia, by giving notice thereof to the Commissioner, and filing in the Patent Office, within such time as the Commissioner shall appoint, his reasons of appeal, specifically set forth in writing, and also paying into the Patent Office, to the credit of the Patent fund, the sum of twenty-five dollars. And it shall be the duty of said Chief Justice, on petition, to hear and determine all such appeals, and to revise such decisions in a summary way, on the evidence produced before the Commissioner, at such early and convenient time as he may appoint, first notifying the Commissioner of the time and place of hearing, whose duty it shall be to give notice thereof to all parties who appear to be interested therein, in such manner as said judge shall prescribe. The Commissioner shall also lay before the said judge all the original papers and evidence in the case, together with the grounds of his decision, fully set forth in writing, touching all the points involved by the reasons of appeal, to which the revision shall be confined. And at the request of any party interested, or at the desire of the judge, the Commissioner and the examiners in the Patent Office may be examined under oath, in explanation of the principles of the machine or other thing for which a patent, in such case, is prayed for. And it shall be the duty of the said judge, after a hearing of any such case, to return all the papers to the Commissioner, with a certificate of his proceedings and decision, which shall be entered of record in the Patent Office; and such decision, so certified, shall govern the further proceedings of the Commissioner in such case: *Provided, however*, That no opinion or decision of the judge in any such case shall preclude any person interested in favor or against the validity of any patent which has been or may hereafter, be granted, from the right to contest the same in any judicial court, in any action in which its validity may come in question.

Proviso.

Commissioner may make regulations respecting contested cases.

SEC. 12. *And be it further enacted*, That the Commissioner of Patents shall have power to make all such regulations in respect to the taking of evidence to be used in contested cases before him, as may be just and reasonable. And so much of the act to which this is additional, as provides for a board of examiners, is hereby repealed.

Compensation of chief justice.

SEC. 13. *And be it further enacted*, That there be paid annually, out of the Patent fund, to the said Chief Justice, in consideration of the duties herein imposed, the sum of one hundred dollars.

Approved March 3d, 1839.

CHAP. CCLXIII.—*An Act in addition to an act to promote the progress of the useful arts, and to repeal all acts and parts of acts heretofore made for that purpose.*

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Treasurer of the United States be, and he hereby is, au-

Act of July 4, 1836, ch. 357.
Act of March 3, 1837, ch. 46.

Act of March 3,
1837, ch. 87.

Treasurer au-
thorized to pay
back, out of, the
Patent fund, cer-
tain money paid
as fees.

Sec. 3, act of
3d March, 1837,
ch. 43, extended
to patents grant-
ed prior to 15th
Dec., 1836, tho'
lost subsequent-
ly.

Proviso.

Citizens, &c.,
may obtain a pa-
tent—how.

Provided

Oath may be
taken before U.
S. ministers, &c.

thorized to pay back, out of the Patent fund, any sum or sums of money, to any person who shall have paid the same into the Treasury, or to any receiver or depositary to the credit of the Treasurer, as for fees accruing at the Patent Office through mistake, and which are not provided to be paid by existing laws, certificate thereof being made to said Treasurer by the Commissioner of Patents.

SEC. 2. *And be it further enacted*, That the third section of the act of March, eighteen hundred and thirty-seven, which authorizes the renewing of patents lost prior to the fifteenth of December, eighteen hundred and thirty-six, is extended to patents granted prior to said fifteenth day of December, though they may have been lost subsequently: *Provided, however*, The same shall not have been recorded anew under the provisions of said act.

SEC. 3. *And be it further enacted*, That any citizen or citizens, or alien or aliens, having resided one year in the United States, and taken the oath of his or their intention to become a citizen or citizens, who by his, her, or their own industry, genius, efforts, and expense, may have invented or produced any new and original design for a manufacture, whether of metal or other material or materials, or any new and original design for the printing of woollen, silk, cotton, or other fabrics, or any new or original design for a bust, statue, or bas relief or composition in alto or basso relievo, or any new and original impression or ornament, or to be placed on any article of manufacture, the same being formed in marble or other material, or any new and useful pattern, or print, or picture, to be either worked into or worked on, or printed or painted or cast or otherwise fixed on, any article of manufacture, or any new and original shape or configuration of any article of manufacture not known or used by others before his, her, or their invention or production thereof, and prior to the time of his, her, or their application for a patent therefor, and who shall desire to obtain an exclusive property or right therein to make, use, and sell and vend the same, or copies of the same, to others, by them to be made, used, and sold, may make application in writing, to the Commissioner of Patents expressing such desire, and the Commissioner, on due proceedings had, may grant a patent therefor, as in the case now of application for a patent: *Provided*, That the fee in such cases, which by the now existing laws would be required of the particular applicant shall be one-half the sum, and that the duration of said patent shall be seven years, and that all the regulations and provisions which now apply to the obtaining or protection of patents not inconsistent with the provisions of this act shall apply to applications under this section.

SEC. 4. *And be it further enacted*, That the oath required for applicants for patents may be taken, when the applicant is not, for the time being, residing in the United States, before any minister, plenipotentiary, charge d'affaires, consul, or

commercial agent, holding commission under the Government of the United States, or before any notary public of the foreign country in which such applicant may be.

SEC. 5. *And be it further enacted*, That if any person or persons, shall paint or print or mould, cast, carve, or engrave, or stamp, upon any thing made, used, or sold, by him, for the sole making or selling which he hath not or shall not have obtained letters patent, the name or any imitation of the name of any other person who hath or shall have obtained letters patent for the sole making and vending of such thing, without consent of such patentee, or his assigns or legal representatives; or if any person, upon any such thing not having been purchased from the patentee, or some person who purchased it from or under such patentee, or not having the license or consent of such patentee, or his assigns or legal representatives, shall write, paint, print, mould, cast, carve, engrave, stamp, or otherwise make or affix the word "patent," or the words "letters patent," or the word "patentee," or any word or words of like kind, meaning, or import, with the view or intent of imitating or counterfeiting the stamp, mark, or other device of the patentee, or shall affix the same, or any word, stamp, or device, of like import, on any unpatented article, for the purpose of deceiving the public, he, she, or they, so offending, shall be liable for such offence to a penalty of not less than one hundred dollars, with costs, to be recovered by action in any of the circuit courts of the United States, or in any of the district courts of the United States having the powers and jurisdiction of a circuit court; one-half of which penalty, as recovered, shall be paid to the Patent fund, and the other half to any person or persons who shall sue for the same.

Penalty for infringing the rights of a patentee, &c., by marking.

How recoverable, &c.

SEC. 6. *And be it further enacted*, That all patentees and assignees of patents hereafter granted, are hereby required to stamp, engrave, or cause to be stamped or engraved, on each article vended or offered for sale, the date of the patent; and if any person or persons, patentees or assignees, shall neglect to do so, he, she, or they shall be liable to the same penalty, to be recovered and disposed of in the manner specified in the foregoing fifth section of this act.

Patentees, &c., required to mark articles offered for sale.

Penalty for neglect.

Approved, August 29th, 1842.

AN INDEX

TO THE

DECISIONS OF THE COURTS OF THE UNITED STATES,

CONCERNING

LETTERS PATENT FOR INVENTIONS,

And the proceedings and evidence in actions for damages on the infringement of Patent rights, the extension of Patents, &c., &c.

It is proper to remark, in reference to the following compilation of the decisions of the several courts of the United States in relation to Patents, and other matters connected with them, that it does not aspire to the dignity of a systematic and logical digest, but is intended merely as an index and guide to persons interested in the examination of Patent law, to point them to the sources whence it is to be sought, namely, the decisions of the courts themselves. In the elaborate and learned opinions of our tribunals will be found the ablest commentaries upon, and the most satisfactory expositions of, the American Patent Law; a general summary of which it has been deemed expedient to submit to the American public, in connection with the Digested Index of Inventions which have been patented in the United States since the establishment and organization of its Patent system in 1790.

INDEX.

I. *Of the forms and subjects of Patents; of the invention or discovery; of the utility of the invention; and of the interpretation and construction of letters patent.*

1. Although it is not settled whether, under the general Patent law, improvements on different machines can be comprehended in the same patent, so as to give a right to the exclusive use of the several machines in combination; yet the act of January 21st, 1808, ch. 117, for the relief of Oliver Evans, authorizes the issuing to him of a patent for his invention, discovery, and improvements in the art of manufacturing flour, and in the several machines applicable to that purpose. *Evans v. Eaton*, 3 Wheat. 454, 1 Peters, 322.

2. Under the sixth section of the Patent law of February 21, 1793, ch. 156, if the thing secured by patent had been in use, or had been described in a public work, anterior to the supposed discovery, the patent is void, whether the patentee had a knowledge of this previous use or description or not. *Ibid*, 1 Peters, 322, S. C.

3. A party cannot entitle himself to a patent for more than his own invention; and if the patent be for the whole of a machine, he can maintain a title to it only by establishing that it is substantially new in its structure and mode of operation. *Evans v. Eaton*, 7 Wheat. 356.

4. If the combinations existed before in machines of the same nature, up to a certain point, and the party's invention consists in adding some new machinery or some improved mode of operation to the old, the patent should be limited to such improvement; for if it includes the whole machinery, it includes more than his invention, and therefore cannot be supported. *Ibid*.

5. Where a patent is taken out for an improvement, the specification ought to describe what the improvement is, and the patent should be limited to such improvement. *Ibid*. 1 Peters, 322. S. C. 3 Wash. C. C. R. 443.

6. The taking of the oath required by the Patent act, previous to the issuing a patent, is but a pre-requisite to the granting of a patent, and in no degree essential to its validity; and if not taken, still the patent is valid. *Whittlemore v. Cutter*, 1 Gallis. 429.

7. The first inventor is entitled to the benefit of his invention, if he reduce it to practice and obtain a patent therefor: and a subsequent inventor cannot, by obtaining a patent, oust the first inventor of his right, or maintain an action against him for the use of his own invention. *Woodcock v. Parker et al.* 1 Gallis. 438. *Bedford v. Hunt*, 1 Mass. 302. *Evans v. Weiss*, 2 Wash. C. C. R. 342.

8. If the machine for which the patent was obtained substantially existed before, and the plaintiff made an improvement only therein, he is entitled to a patent for the improvement only, and not for the whole machine: and when, under such circumstances, the patent comprehends the whole machine, it is too broad, and therefore void. *Ibid*.

9. It is not necessary to defeat the plaintiff's patent, that a machine should previously have existed in every respect similar to his own; for a mere change of former proportions will not entitle a party to a patent. *Ibid*.

10. If he claim a patent for a whole machine, it must in substance be a

new machine; that is, it must be a new mode, method, or application of mechanism to produce some new effect, or to produce an old effect in a new way. *Ibid.*

11. If one who has invented merely an improvement, take out a patent for the whole machine, his patent is too broad, and utterly void. *Whittemore v. Cutter*, 1 Gallis. 476.

12. When a specific machine already exists, producing certain effects, if a mere addition is made to such machine, to produce the same effect in a better manner, a patent cannot be taken for the whole machine, but for the improvement only. *Ibid.*

13. In like manner, if to an old machine some new combinations be added, to produce new effects, the right to a patent is limited to the new combinations. *Ibid.*

14. A patent can, in no case, be for an effect only, but for an effect produced in a certain manner, or by a peculiar operation. For instance, no patent can be obtained for the admeasurement of time, or the expansive operations of steam; but only for a new mode or new application of machinery to produce these effects: and therefore if new effects are produced by an old machine, in its unaltered state, no patent can be legally supported, for it is a patent for an effect only. *Ibid.*

15. On the other hand, if well known effects are produced by machinery, in all its combinations entirely new, a patent may be claimed for the whole machine. *Ibid.*

16. So if the principles of the machine are new, either to produce a new or an old effect, the inventor may well entitle himself to the exclusive right of the whole machine. *Ibid.*

17. By the principles of a machine, as these words are used in the statute, is not meant the original elementary principles of motion which philosophy and science have discovered, but the *modus operandi*, the peculiar device or manner of producing any given effect. The expansive power of steam and the mechanical powers of wheels have been understood for ages; yet a machine may well employ either the one or the other, and yet be so entirely new in its mode of applying them, as to entitle a party to his patent for his whole combination. *Ibid.*

18. It is not sufficient to give validity to a patent that the specific machine, with all its combinations and effects, did not exist before; for if the same effects were all produced by the same application of machinery in separate parts, and the party merely combined them together, or added a new effect, such combination would not sustain the patent; as the artist who added a second hand or repeater to a watch, could not have been entitled to a patent for the whole watch. *Ibid.*

19. The original inventor of a machine is exclusively entitled to a patent for it. Mere colorable differences, or slight improvements, will not affect his rights. *Odiorne v. Winkley*, 2 Gallis. 51.

20. If another person invent an improvement on a machine, he can entitle himself to a patent for the improvement only, and does not thereby acquire a right to patent and use the original machine: and if he obtain a patent for the whole machine, and not for the improvement only, his patent is too broad, and therefore void. *Ibid.*

21. The material question in patent causes is, not whether the same elements of motion, or the same component parts are used, but whether the given effect is produced substantially by the same mode of operation, and the same combination of powers in both machines. Mere colorable differences or slight improvements cannot shake the right of the original inventor. *Ibid.*

22. By the expression "true inventor" in the statute is undoubtedly meant the sole and exclusive inventor; for if the machine were the joint invention of several persons, neither of them could claim to be the true inventor, having an exclusive right to the patent, but the interest would be a joint or common interest in the whole. In such a case, therefore, if a party were to obtain a patent for the invention, having sworn that he was the true inventor, he would, in the language of this act, obtain it upon "false suggestion," and as such false suggestion would be a surprise and fraud upon the Government, it might well also be declared to be obtained "surreptitiously." *Stearnes v. Barret*, 1 Mason, 153.

23. The law allows a party a patent for a new and useful invention; and by "useful invention" is meant, not an invention, in all cases superior to the modes now in use for the same purpose, but useful in contradistinction to frivolous and mischievous inventions. *Lowell v. Lewis*, 1 Mason, 182.

24. As among inventors, he who is first in time has a prior right to the patent for the invention. *Ibid*.

25. By "useful invention" in the Patent act of the United States, is meant an invention which may be applied to a beneficial use in society, in contradistinction to an invention which is injurious to the morals, the health, or the good order of society. *Bedford v. Hunt et al.*, 1 Mason, 302. *Kneas v. Schuyllkill Bank*, 4 Wash. C. C. Rep.

26. It is not necessary that the invention should be of such general utility as to supersede all other inventions previously in practice, to accomplish the same purpose. *Ibid*, 1 Mason, 302.

27. Nor is it important that its practical utility should be very limited, for the law does not look to the degree of utility. *Ibid*.

28. A joint patent may well be for a joint invention, but not for a sole invention of one of the patentees: if each of the patentees obtain separate patents for the same invention, as his exclusive invention, and afterwards both obtain a joint patent for the same as their joint invention, they are estopped by the joint patents from asserting any title under the several patents. *Barrett et al. v. Hall et al.*, 1 Mason, 447.

29. If several patents are taken out by several patentees for a several invention, and the same patentees afterwards take out a joint patent for the same as a joint invention, the parties are not absolutely estopped from asserting the invention to be joint, but the former patents are very strong evidence against a joint invention. *Ibid*.

30. A patent cannot embrace various distinct improvements or inventions, but in such case the party must take out separate patents: and if the patentee has invented certain improved machines, which are capable of a distinct operation, and also has invented a combination of those machines to produce a connected result, the same patent cannot at once be for the combination and for each of the improved machines, for the inventions are as distinct as if the subjects were entirely different. *Ibid*.

31. An inventor cannot, under the Patent laws of the United States, have two subsisting valid patents at the same time, for the same invention. The first that he obtains, while it remains unrepealed, is an estoppel to any future patent for the same invention, founded upon the general Patent act. *Odiorne v. The Amesbury Nail Factory*, 2 Mason. 28.

32. An invention or improvement, for which a patent has been obtained, must be useful, within the meaning of the Patent law, or the patent is void. *Langdon v. De Groot et al.*, 1 Paine, 203.

33. Whether the usefulness of an invention be matter of fact to be left to the jury, or whether the court is to decide it as matter of law, *Query?* *Ibid*.

34. It seems, however, that if, on the plaintiff's own showing, the invention appears to be useless, and an imposition on the public, the court should so direct the jury. *Ibid.*

35. An invention of an ornamental mode of putting up thread, which gave it no additional value, but merely made it sell more readily at retail, and for a larger price, is not a useful invention within the meaning of the Patent law. *Ibid.*

36. Under the Patent act of February 21st, 1793, c. 156, a patent is valid, although the invention may have been in use for years anterior to the date of the patent, if the patentee was the inventor. *Goodyear v. Matthews*, 1 Paine, 300.

37. A patent for an entire machine is valid, although the invention consists only of an improvement on such machine; but the patentee is entitled to an exclusive use of no more than his improvement. *Ibid.*

38. The first section of the Patent act of February 21st, 1793, c. 156, construed in connexion with the other sections of the act, means that the invention should not be known or used as the invention of any other person than the patentee, before the application for the patent. *Morris v. Huntingdon*, 1 Paine, 348.

39. If the invention has got into use while the inventor was practising upon it, with a view to improve it before applying for a patent, such use does not invalidate the patent; and the motive for delay is a question for the jury. *Ibid.*

40. To obtain a patent under the laws of the United States, the party must be the original inventor in reference to the whole world; it is not sufficient that he be the first inventor within the United States. *Reutgers v. Kanowers et al.*, 1 Wash. C. C. R. 168. *Evans v. Eaton*, 1 Peters' C. C. R. 323.

41. One who is the inventor of an improvement in the principle of a machine has the same right to the use of it as the inventor of the original machine had to that: *aliter*, if it be only in the form or proportion. *Ibid.* *Gray et al. v. James et al.*, 1 Peters' C. C. R. 394.

42. It is a sufficient objection to the validity of a patent, that the allegations and suggestions of the petition are not recited in it. *Evans v. Chambers*, 2 Wash. C. C. R. 125.

43. If two machines be substantially the same, operating in the same manner to produce the same result, though they vary in forms, proportions, and degrees of utility, they are the same in principle, and the discoverer of the latter is entitled to a patent only for an improvement. *Evans v. Eaton*, 3 Wash. C. C. R. 443.

44. These are defects in the plaintiff's title, apparent upon the face of the documents on which the title is founded. On the same ground, defendant may object that the patent is broader than the discovery; that it is for an improvement which is not distinguished in the specification from the original invention; that the suggestions of the petition are not recited substantially in the patent. *Kneass v. The Schuylkill Bank*, 4 Wash. C. C. R.

45. A mistake of the word *painting* for *printing* in the patent is immaterial, if explained by other parts of the patent and specification, so that there can be no mistake. *Ibid.*

46. It is no objection to the validity of a patent that the mode of performing an operation, common and well known, is not described. *Ibid.*

47. The patent granted to O. Evans contains no grant of a right to the several machines, but is confined to the improvements in the art of manufacturing flour by those machines; although the act of Congress, authorizing the grant of the patent, authorized it to be issued for the several machines, as well as for the entire improvement. *Evans v. Eaton*, 1 Peters' C. C. R. 322.

48. A patent may be for a new and useful art; but it must be practicable

and explicable, and referable to something which may prove it to be useful. *Ibid.*

49. A machine or an improvement may be new and entitled to a patent, although parts of it were before known and used. *Ibid.*

50. The combination of old machines to produce a new and useful result, is a discovery for which a patent may be granted. *Ibid.*

51. Where two machines are substantially the same, and operate in the same manner to produce the same result, they must be in principle the same. *Gray et al. v. James et al.*, 1 Peters' C. C. R. 394.

52. A patent "for an improvement in the art of making nails, by means of a machine which cuts and heads the nail at one operation," is not a grant of an abstract principle, nor is it the grant of the different parts of any machine, but of an improvement applied to a practical use, effected by a combination of various mechanical powers to obtain a new result. *Ibid.*

53. It is not sufficient to invalidate a patent that the specification is materially defective, unless the patentee intended by concealment of parts of the machine to deceive; and where practical mechanics are enabled to supply any omission in the specification, such an intention will not be presumed. *Ibid.*

54. By useful invention in the Patent act of the United States, is meant an invention which may be applied to a beneficial use in society, in contradistinction to an invention injurious to the moral health or good order of society. *Bedford v. Hunt*, 1 Mason, 302.

55. It is of no consequence whether its utility be general or limited to a few cases; and it is not necessary to establish, that the invention is of such general utility, as to supersede the other inventions now in practice to accomplish the same purpose. *Ibid.*

56. Under the Patent laws of the United States, the applicant for a patent must be the first, as well as the original, inventor; and a subsequent inventor, although an original inventor, is not entitled to a patent, if the invention is perfected and put into actual use by the first and original inventor; and it is of no consequence whether the invention is extensively known or used, or whether the knowledge or use thereof is limited to a few persons, or even to the first inventor himself, or is kept a secret by the first inventor. *Reed v. Cutter*, 1 Story, 590.

57. The decision in *Dolland's case*, that a first and original inventor, who had kept his invention a secret, so that the public had no benefit thereof, could not defeat the patent of a subsequent original inventor, may be a correct exposition of the Statute of Monopolies (Stat. of 21 James I, ch. 3, § 6); but it is not applicable to the Patent Laws of the United States. *Ibid.*

58. The language of the Patent act of 1836, ch. 357, § 6, "not known or used by others before his or their discovery thereof," does not require that the invention should be known or used by more than one person, but merely indicates that the use should be by some other person or persons than the patentee. *Ibid.*

59. Under the Patent act of 1836, (ch. 357, § 15,) an inventor, who has first actually perfected his invention, will not be deemed to have surreptitiously or unjustly obtained a patent for that which was in fact invented by another, unless the latter was, at the time, using reasonable diligence in adapting and perfecting the same; yet he who invents first shall have the prior right, if he is using reasonable diligence in adapting and perfecting the same, although the second inventor has in fact first perfected the same, and first reduced the same to practice in a positive form. *Ibid.*

60. An imperfect and incomplete invention, resting in mere theory, or in intellectual notion, or in uncertain experiments, and not actually reduced to

practice, and embodied in some distinct machinery, apparatus, manufacture, or composition of matter, is not patentable under the laws of the United States. He is the first inventor, in the sense of the Patent act of the United States, and entitled to a patent for his invention, who has first perfected and adapted the same to use; and until the invention is so perfected and adapted to use, it is not patentable. *Ibid.*

61. It seems, that in a race of diligence between two independent inventors, he who first reduces his invention to a fixed and positive form is entitled to a priority of right to a patent therefor. *Ibid.*

62. Where a patent for an improvement on looms sets forth as the invention claimed "the communication of motion from the Reed to the Yarn Beam, in the connection of the one with the other, which is produced as follows," describing the mode. It was *held*, that the invention was limited to the specific machinery and mode of communicating the motion, &c., specially described in the specification. If it were otherwise construed, as including *all* modes of communicating the motion, &c., it would be utterly void, as being an attempt to patent an abstract principle, or for all possible and practical modes of communication of motion whatsoever, though invented by others, and substantially different from the mode stated in the patent. *Stone v. Sprague*, 1 Story, 270.

63. Patents for inventions are not granted as monopolies or restrictions upon the rights of the community, but "to promote science and the useful arts," and are to be liberally construed. *Blanchard v. Sprague*, 2 Story, 164.

64. The power of Congress to grant to inventors is general; and it is in their discretion to say, when, and for what length of time, and under what circumstances, the patent for an invention shall be granted. *Ibid.*

65. Congress has power to pass an act, which operates retrospectively, to give a patent for an invention already in public use; but no act will be construed to operate retrospectively, unless such a construction is unavoidable. *Ibid.*

66. In the present case, *it was held*, that the patent was for a machine, and not for a principle or function; and, therefore, was valid. *Ibid.*

67. The application of an old process to produce a new result, is not a patentable invention; there must be, also, some new process or mode. But the production of an old result by a new process is patentable. *Howe v. Abbott*, 2 Story, 190.

68. A machine is only patentable when it is substantially new; but the application of an old machine to a new process is not patentable. *Bean v. Smallwood*, 2 Story, 408.

69. In the present case, the invention was held not to be patentable, because it was merely the application of an old apparatus to a new purpose. *Ibid.*

70. Where the plaintiff, in the specification of his patent, claimed as his invention "an improvement in the construction of the axles or bearings of railway, or other wheeled carriages," and it appeared that the improvement, though it had never before been applied to railway carriages, was well known as applied to other carriages, *it was held*, the patent was not good. *Winans v. Prov. R. R. Co.*, 2 Story, 412.

71. Patents are to be interpreted by a consideration of the whole instrument, and it is to be thereby determined what thing is intended to be patented. *Carver v. Braintree Manufacturing Co.*, 2 Story, 433.

72. Whoever finally perfects a machine, and renders it capable of useful operation, is entitled to a patent, although others may have had the idea, and made experiments towards putting it into practice; and although all of the component parts may have been known under a different combination, or used for a different purpose. *Washington v. Gould*, 3 Story, 122.

73. Patents are entitled to a liberal construction, since they are not granted as restrictions upon the rights of the community, but "to promote science and the useful arts." *Blanchard v. Sprague*, 3 Sumner, 535.

74. A patent will not be valid, which is simply a principle or function detached from machinery. *Ibid.*

75. Congress has general power, under the Constitution of the United States, to grant patents to inventors; and it rests in the sound discretion of Congress to say, when and for what length of time, and under what circumstances, the patent for an invention shall be granted. Therefore, an act of Congress, granting a patent, was not unconstitutional, though it operated retrospectively to give a patent for an invention, which, though made by the patentee, was in public use and enjoyed by the community at the time of the passage of the act. *Ibid.*

76. A patent was granted by act of Congress of 1834, ch. 213, but declared void by the Court, on the ground of a defect in the act. Afterwards the grant of the patent was renewed by another act of Congress (1839, ch. 14.) *Quære*, whether the latter act would be constitutional, if it gave damages for the construction or use of the machine before the grant of the patent under the act. *Ibid.*

77. It is not necessary to the validity of a patent for a new and useful invention, that any of the ingredients should be new or unused before for the purpose. The true question is, whether the combination of materials by the patentee is substantially new. *Ryan v. Goodwin*, 3 Sumner, 514.

78. An invention, to be valid, must be substantially different from any machine or thing in use. *Stanley v. Whipple*, 2 McLean's R., 35.

79. The true meaning of the words of the Patent law, "not known or used before the application," is, not known or used by the public before the application. *Pennock et al. v. Dialogue*, 2 Peters' R., 19.

80. The words "any newly invented machine, manufacture, or composition of matter," in the 7th section of the act of 1839, have the same meaning as "invention," or "thing patented." *McChurg et als. v. Kingsland et als.*, 1 Howard, 202.

81. Same as the above. *Smith v. Pearce*, 2 McLean, 176.

82. An alteration merely formal, or a slight improvement, will give no right. *Ibid.*

83. By the provisions of the act of Congress of 17th April, 1800, citizens and aliens, as to patent rights, are placed substantially upon the same ground. In either case, if the invention was known or used by the public before it was patented, the patent is void. In both cases, the right must be tested by the same rule. *Shaw v. Cooper*, 7 Peters', 202.

84. A patent, to be valid, must be of some utility. *Stanley v. Whipple*, 2 McLean, 35.

85. Mere technical objections to letters patent are not to be encouraged or construed liberally for him making them. *Woodworth v. Hall*, 1 Woodbury, 248.

86. A patent is not to protect a monopoly of what existed before and belonged to others, but to protect something which did not exist before, and which belongs to the patentee. *Davoll v. Brown*, 1 Woodbury, 53.

87. A construction of patents, liberal for the patentees, is proper. But the description of the patent must be so certain, as to be understood by those acquainted with the subject matter. *Ibid.*

88. But the whole of the specification, as well as the summary and the drawings, are generally to be examined and compared, and not one alone look-

ed to, in order to decide what new part or new combination is claimed to be invented and protected. *Ibid.*

89. In coming to a result, practical views, rather than subtle distinctions, must govern. *Ibid.*

90. A difference in form or proportions only, makes no difference in the principle of a machine *Brooks & Morris v. Jenkins et al.*, 3 McLean, 250.

91. A patent is invalid, if described in a foreign publication. *Ibid.*

92. The exclusive grant in a patent is the construction and use of the thing patented. *Boyd v. Brown*, 3 McLean, 295.

93. Where the right consists in certain instruments, by which a bedstead of a particular structure is made, the structure or use of these instruments is prohibited. *Ibid.*

94. A patentee of a flouring mill of a certain structure, has an exclusive right to make and use such mill, but he can claim no monopoly in the sale of the flour he manufactures. *Ibid.*

95. If the thing claimed to have been invented has been before made, or described in any public work, the patent is void. *Ibid.*

96. The principle of a machine depends upon its peculiar structure, by which a certain effect is produced. *Ibid.*

97. To constitute an inventor, it is not necessary to have the manual skill to make the draughts, &c., if the ideas are furnished for producing the result aimed at. *By Judge Betts, in Spackman & Kelsey v. A. & E. Higgins & Co. and C. & E. Harvey*, U. S. C. C. Southern District of New York, January term, 1847.

98. An inventor may sell* the thing invented before the same shall have been patented, and may stipulate for the sale of his invention before it is completed, without vitiating his claim. *By Judge Betts, in Spackman et al. v. Higgins et al.*, U. S. C. C. Southern District of New York, January term, 1847.

99. Some months before the patent issued, the inventors issued their manufactured goods as patent goods, or registered patterns. Now, although "registered pattern" is not a term at law, yet it may well indicate them to be claimed by the inventors as their design, and for which they were preparing to take out a patent. *Ibid.*

100. The study of Courts has usually been, and especially since the Patent acts of 1836 and 1839, to carry out the protection of the law to inventors, so as to secure them the full benefit of their inventions. The inventors are bound to notify the public of their claim, by an application for a patent. This is a matter of nicety, and men of great experience are often in difficulty as to the precise mode of getting up their papers. Correspondence ensues between the officers at Washington and the patentee, which consumes time. But if the claim thus put forward, although originally informal, be followed up with reasonable diligence, and if eventually the patent is granted, it excludes strangers interfering in the mean time. *Ibid.*

101. Inventors cannot be stripped of their property—the fruit, oftentimes, of great toil, ingenuity, and expense—by slight and unimportant alterations in the machine; alterations which the description of the invention would of itself naturally, if not necessarily, suggest, without the aid of much ingenuity and skill. *By Judge Nelson, in Gibson v. Harris*, U. S. C. C. Northern District of New York, at Chambers, November 10, 1846.

*Provided such sale shall be within two years from the date of the invention, and under circumstances which do not show that it is the intention of the inventor to waive his claim to a patent and dedicate his invention to the public. See act of 1839, sec. 7th.—[Compiler.]

102. Under the acts of 1836 and 1890, the earliest invention is to prevail over any subsequent one, unless allowed to go into public use, or on sale, for two years before taking out a patent. *By Justice Woodbury, in Allen v. Bunt*, U. S. C. C. Mass. District, November term, 1846.

103. An invention, to be as valid as the first, must be seasonably reduced to practice, and put in use. *Ibid.*

104. To warrant a patent the invention must be useful, that is, capable of some beneficial use, in contradistinction to pernicious, or frivolous, or worthless. *Dickinson v. Hall*, 14 Pick. 217.

105. A patented invention is deemed useful if it is not frivolous. The want of utility is good cause for not granting the patent, but not for setting it aside. *Whitney v. Emmett*, 1 Bald. 303.

106. A court cannot pronounce a patent worthless merely from the specification, without evidence of any experiments. *Case v. Morey*, 1 N. Hamp. 347.

107. The provisions of the 10th section of the act of 21st February, 1793, apply only to cases in which a patent has been obtained by fraud, surreptitiously, or by false suggestions, and are intended to protect the public from imposition. *Delano v. Scott*, Gilpin, 489.

108. A patent issued by the United States, securing the exclusive right to manufacture and use certain medicines, does not authorize a person to administer them in the character of a practising physician; unless he is regularly licensed to practise, and in other respects conforms to the laws of the State where the medicines are administered. *Jordan v. Overseers of Dayton*, 4 Ham. 294.

109. If a patent is for an improvement, it must be substantially new, and one capable of application by the means pointed out by the patent, specification, drawing, model, and old machine. *Whitney v. Emmett*, 1 Bald. 303.

110. And if, by these means, the invention, and the mode of using it, are intelligible to persons of mechanical skill in the subject matter, the requisites of a specification, by the 3d section of the act of 1793, are complied with. *Ibid.*

111. Though a patentee believes himself *bona fide* to be the original inventor of the improvement patented, yet the fact of his not being so, if it does not constitute a false suggestion in obtaining it, appears to be a sufficient ground for repealing it. *Delano v. Scott*, Gilpin, 489.

112. Where two patents are granted for the same thing, the second patent is inoperative until the first is set aside. *Jackson v. Lawton*, 10 Johns., 23.

113. A patent issued to an assignee stands on the same footing, as to remedy, as if issued to the party originally entitled. *Wallace v. Minor*, 7 Ham. (Part 1st,) 249.

114. The assignment of a patent, though not recorded in the office of the Secretary of the United States,* is still valid, except as against creditors and subsequent purchasers without notice. *Holden v. Curtis*, 2 N. Hamp. 61.

115. A mere nominal variance between the patent itself and the description of it in the conveyance, does not make the assignment of it invalid. Nor is the patent itself void, because the elementary principles of it were previously known and used, unless the application of them is similar to others. *Ibid.*

116. A controversy respecting the validity of a patent right is one strictly between the parties immediately concerned, although the public may have an eventual interest in it. *Wood v. Williams*, Gilpin, 517.

II. *Of the specification and description of the invention or discovery, and of the claim.*

117. No defect or concealment in the specification will avoid the patent, unless it arose from an intention to deceive the public. *Whittemore v. Cutler*, 1 Gallis, 429.

* In the Patent Office. See Act of July 4, 1836, sec. 11th.

118. The patentee must describe in his patent in what his invention consists with reasonable certainty, otherwise it is void for ambiguity. If it be for an improvement in an existing machine, he must, in his patent, distinguish the new from the old, and confine his patent to such parts only as are new; for if both are mixed up together, and a patent is taken for the whole, it is void. *Howell v. Lewis*, 1 Mason, 182.

119. But if the invention is definitely described in the patent, so as to distinguish it from what is before known, the patent is good, although the specification does not describe the invention in such full and exact terms that a person skilled in the art and science of which it is a branch would construct or make the thing invented; unless such defective description or concealment were with intent to deceive the public. *Gray v. Osgood*, 1 Peters' C. C. R. 374.

120. If the patent be for an improved machine, or for an improvement of a machine, for the meaning of the terms is substantially the same, then the patent must state in what the improvement specifically consists, and it must be limited to such improvement. *Barrett et al. v. Hall et al.*, 1 Mason, 447.

121. If, therefore, the terms be so obscure or doubtful that the court cannot say which is the particular improvement which the patentee claims, and to what it is limited, the patent is void for ambiguity; and if it covers more than the improvement, it is void, because it is broader than the invention. *Ibid.*

122. Where a combination of machinery already exists up to a certain point, and the patentee makes an addition or improvement to the machinery, he must confine his patent to the improvement. *Ibid.*

123. If an invention consists in a new combination of machinery, or in improvements upon an old machine to produce a new effect, the patent should be for the combined machinery or improvements on the old machine, and not for a mere mode or device for producing such effects, detached from the machinery. *Ibid.*

124. Where a patentee, in his specification, states and sums up the particulars of his invention, and his patent covers them, he is confined to such summary, and he cannot afterwards be permitted to sustain his patent by showing that some part which he claims, in his summing up, as his invention, though not in fact his invention, is of slight value or importance in his patent. His patent covers it; and if it be not new, the patent must be void. *Moody v. Fiske et al.*, 2 Mason, 112.

125. A patent for an improvement should describe the machine in use, that it may be known in what the improvement consists. *Sullivan v. Redfield et al.*, 1 Paine, 441.

126. One had patented "a new and useful improvement in the steam tow boat," but the specification did not mention the invention as an improvement, but simply described a tow boat: Held, that the specification was broader than the patent, and therefore bad. *Ibid.*

127. The invention should be so clearly described as to enable the public to put it in use. *Ibid.*

128. The specification described the invention as "consisting essentially in attaching the packet to the steamboat, with ropes, chains, or spars, so as to communicate the power of the engine from the towing vessel to the vessel taken in tow, and kept always at convenient distance; the manner of applying the power varying with the circumstances in some measure." Held, bad for uncertainty. *Ibid.*

129. It is for the jury to decide whether the specification discloses the whole truth relative to the discovery, or whether any thing material has been concealed with intent to deceive. *Reutgers v. Kanowers et al.*, 1 Wash. C. C. R.

168. *Evans v. Eaton*, 1 Peters' C. C. R., 323. *Gray et al. v. James et al.*, 1 Peters' C. C. R. 394.

130. It is not enough that the thing designed to be embraced by the patent should be made apparent on the trial, by a comparison of the new with the old machine. The patent or specification must distinguish the new from the old, so as to point out in what the improvement consists. *Dixon v. Moyer*, 4 Wash. C. C. R. 68.

131. The schedule annexed to letters patent is part of the patent, so far as it is a description of the machine, but no farther. *Evans v. Eaton*, 1 Peters' C. C. R. 322.

132. The grant of an exclusive privilege by the patent can be only for the discovery recited and described in the patent and specification. *Ibid.*

133. In the present case, the patent and specification claimed for the patentee, as his invention, the cutting of ice of a uniform size by means of an apparatus worked by any other power than human. It claimed, also, not only the invention of this art, but also the particular method of the application of the principle, stated in the specification, which was by two machines described therein, called the saw and the cutter. It was held by the court, that the specification, so far as it claimed the art of cutting ice by means of an apparatus worked by any other power than human, was the claim of an abstract principle, and void; but so far as it claimed the two machines described in the specification, it might be good, if a disclaimer were made of the other parts, according to the Patent act of 1837, ch. 45, § 7 and § 9, within a reasonable time, and before the suit were brought. But a disclaimer, after the suit brought, would not be sufficient to entitle the party to a perpetual injunction in equity, whatever might be his right to maintain a suit at law on the patent. *Wyeth v. Stone*, 1 Story, 273.

134. If the patentee has assigned his patent in part, and a joint suit is brought in equity for a perpetual injunction, a disclaimer by the patentee alone, without the assignee uniting in it, will not entitle the parties to the benefit of the 7th and 9th sections of the act of 1837, ch. 45. *Ibid.*

135. A single patent may be taken for several improvements on one and the same machine, or for two machines, which are invented by the patentee, and conduce to the same common purpose and object, although they are each capable of a distinct use and application, without being united together. But a single patent cannot be taken for two distinct machines, not conducing to the same common purpose or object, but designed for totally different and independent objects. *Ibid.*

136. An inventor is bound to describe in his specification in what his invention consists, and what his particular claim is. But he is not bound to any precise form of words, provided their import can be clearly ascertained by fair interpretation, even though the expressions may be inaccurate. *Ibid.*

137. A disclaimer, to be effectual for all intents and purposes, under the act of 1837, ch. 45, (§ 7 and 9,) must be filed in the Patent Office before the suit is brought. Unless it is filed before the suit, the plaintiff will not be entitled to recover costs in such suit, even if he should establish at the trial that a part of the invention, not disclaimed, had been infringed by the defendant. And where a disclaimer has been filed, either before or after the suit is brought, the plaintiff will not be entitled to the benefit thereof, if he has unreasonably neglected or delayed to enter the same at the Patent Office; but an unreasonable neglect or delay will constitute a good defence and objection to the suit. *Reed v. Cutter*, 1 Story, 590.

138. Where an invention is so loosely and inaccurately described in the specification that the court cannot, without resorting to conjecture, gather what it is,

then the patent is void; but if the court can clearly see the nature and extent of the claim, however imperfectly and inartificially it may be expressed, the patent is good. *Ames v. Howard*, 1 Sumner, 482.

139. A patent contained the following words in the description of the invention: "I do not claim the felting, vats, rollers, presses, wire-cloth, or any separate parts of the above described machinery or apparatus, as my invention; what I do claim as new, and as my invention, is the construction and use of the peculiar cylinder above described, and the several parts thereof in combination for the purpose aforesaid." *Held*, that it is not the cylinder alone, or its several parts, which are claimed *per se*; but they are claimed in their actual combination with the other machinery to make paper. *Ibid*.

140. Under the former law, a patent was void, if the patentee claimed more than he had invented. *Stanley v. Whipple*, 2 McLean, 35.

141. Where the plaintiff, in a patent for "a new and useful improvement in the ribs of the cotton gin," claimed, as a part of his invention, the increasing the space between the upper and lower surface of the rib, either "by making the ribs thicker at that part, or by a fork, or by any other variation of the particular form," it was held, that the claim was sufficiently accurate as a matter of law, and that it was not necessary that he should describe all possible modes by which the rib might be varied, but only the most important, and that mere formal variations therefrom would be violations of the patent. *Carver v. Braintree Manufacturing Co.*, 2 Story, 432.

142. Where the original patent was for "a new and useful improvement in the ribs of saw gins for ginning cotton," and the renewed patent was for "a new and useful invention in the manner of forming the ribs of saw gins for ginning cotton," and in the renewed patent was claimed, in addition to the thickness of the rib, the sloping up of it so as to leave no shoulder, it was held, that the claim in the renewed patent was not for two distinct improvements, but for additional parts of the same improvement, and that the same thing was patented in both patents. *Ibid*.

143. Where the plaintiff, in the specification of his patent, described his invention to be "a new and useful improvement," whereas, in fact, it consisted of a combination of several improvements, distinctly set forth in the specification, it was held, that the patent was good, not only for the combination, but for each distinct improvement, so far as it was his invention; and that the descriptive words were to be construed in connection with the specification. *Pitts v. Whitman*, 2 Story, 609.

144. Where the plaintiff claimed, as his invention, "the construction and use of an endless apron, divided into troughs and cells, in a machine for cleaning grain, operating substantially in the way described," it was held, that the claim was for a combination of the endless apron with the machine for cleaning grain; and that, if the combination were new, it was patentable, although a part of the apparatus were old. *Ibid*.

145. Drawings, not referred to in the specification of a patent, may be treated as part of the specification, and used to explain and enlarge it. *Washburn v. Gould*, 3 Story, 122.

146. The Court will give a liberal construction to the language of all patents and specifications; and will in all cases, by taking the whole together, adopt that interpretation of a specification, which will give the fullest effect to the nature and extent of the claim made by the inventor. *Ryan v. Goodwin*, 3 Sumner, 514.

147. The inventor of a new compound, wholly unknown before, is not limited to the use always of the same precise ingredients in making that compound; and if the same purpose can be accomplished by him by the substitution in

part of other ingredients in the composition, which have never been so used before, he is at liberty to extend his patent so as to embrace them also. Thus, where an inventor claimed as his invention the combination of phosphorus with chalk, or any other absorbent earth or earthy material, and glue, or any other glutinous substance, using the materials in the proportions substantially as set forth in the specification, in making matches; it was held, that the patent was not void as being too broad and comprehensive. *Ibid.*

148. An original patent being destroyed by the burning of the Patent Office, and the only record of the specifications being a publication in the Franklin Journal, the claim is not limited by that publication, because the whole of the specifications are not set forth in it. *Simpson v. West Chester Railroad Co.*, 4 Howard, 380.

149. In the case of Woodworth's planing machine, the patent granted to the administrator was founded upon a sufficient specification and proper drawings, and is valid. *Wilson v. Rosseau*, 4 Howard, 646.

150. In order to obtain a patent, the specification must be in such full, clear, and exact terms, as to enable any one skilled in the art to which it appertains to compound and use the invention, without making any experiments of his own. *Wood v. Underhill*, 5 Howard, 1.

151. If the patent be for a new composition of matter, and no relative proportions of the ingredients are given, or they are stated so ambiguously and vaguely that no one could use the invention without first ascertaining, by experiment, the exact proportion required to produce the result, it would be the duty of the court to declare the patent void. *Ibid.*

152. But the sufficiency of the description in patents for machines, or for a new composition of matter, where any of the ingredients do not always possess exactly the same properties in the same degree, is generally a question of fact to be determined by the jury. *Ibid.*

153. Where a patent was obtained for a new improvement in the mode of making brick, tile, and other clay ware, and the process described in the specification was, to mix pulverized anthracite coal with the clay before moulding it, in the proportion of three fourths of a bushel of coal-dust to one thousand brick, some clay requiring one-eighth more, and some not exceeding half a bushel, this degree of vagueness and uncertainty was not sufficient to justify the court below in declaring the patent void. *Ibid.*

154. The court should have left it to the jury to say, from the evidence of persons skilled in the art, whether the description was clear and exact enough to enable such persons to compound and use the invention. *Ibid.*

155. If the patentee claims, as a part of his invention, some things which are old, and some new, he cannot succeed, without disclaiming what is old. *Hovey v. Stevens*, 1 Woodbury, 290.

156. It should appear also, with reasonable certainty, whether the complainant in his patent claims a new combination of old parts and things, or a new invention of new parts, and if not intelligible as to which is claimed, the patent may be void for uncertainty. *Ibid.*

157. It is the duty of the court, rather than the jury, to construe the language used in a specification of a patent, if no parol evidence is offered in explanation, or none which is contradictory. *Davoll v. Brown*, 1 Woodbury, 53.

158. If a patentee claims more than he has invented, his patent is not void, as under the former law, but so far as his invention goes he is protected. *Peterson v. Wooden*, 3 McLean, 248.

159. But where the patent is for the improvement of a machine, the patentee must show in what the improvement consists. *Ibid.*

160. The thing invented must be accurately described. *Boyd v. McAlpen*, 3 McLean, 427.

161. The specifications of an improvement of a machine must be so clear as to enable a person acquainted with the structure of such a machine to build one. *Brooks & Morris v. Jenkins et al.*, 3 McLean, 250.

162. If the claim of the patentee on letters patent do not expressly refer to another portion of his specification, he will be confined to the particular thing specifically described in his claim; but if he do refer to another portion of the specification for a definition of his invention, such portion of the specification becomes a part of his claim, as really as if it had been incorporated into it in the very words of the part referred to. *By Judge Sprague, in Hovey v. Stevens*, U. S. C. C. Mass. District, November term, 1846.

163. Amendments to the specification made upon a re-issue of letters patent came to the benefit of the grantees of rights under said letters patent, as well as to the patentee. *By Judge Kane, in Smith & Sloat v. Mercer and Pechin*, U. S. C. C. Eastern District of Pennsylvania, October term, 1846.

164. If an amended specification describes a different improvement from that which was embraced in the original patent, the new patent will not be invalidated by variance. For the purpose of an injunction, if for nothing else, the invention must be taken to be the same in both patents, after the Commissioner of Patents has so decided by granting a new patent. *Ibid.*

165. It is not necessary under our Patent laws, as in England, that the disclosure of the secret, in the specification, should be such as to enable the public to use the invention after the Patent has expired. *Whitney v. Emmett*, 1 Bald. 303.

166. If there be a false suggestion in any of the several material facts set forth in a specification, the patent is invalid. *Delano v. Scott*, Gilpin, 489.

167. A patent for an improvement in a machine, must describe the machine in use of which it is an improvement, so that it may be known in what the improvement consists; and a note given for a patent defective in that respect is void for the want of a consideration. *Cross v. Huntly*, 13 Wend. 385.

III. *Of the infringement of patent rights; and of damages.*

168. The act of January 21st, 1808, ch. 117, for the relief of Oliver Evans, does not authorize those who erected his machinery, between the expiration of his old patent and the issuing of the new one, to use it after the issuing of the latter. *Evans v. Jordan et al.*, 9 Cranch, 199.

169. A, having obtained a patent for a new and useful improvement, to wit, a machine for making watch chains, brought an action under the 3d section of the Patent act of April 17, 1800, c. 179, against B, for an alleged violation of his patent right. On the trial an agreement was proved between the defendant and C, by which the former agreed to purchase of the latter all the watch chains, not exceeding five gross a week, which he might be able to manufacture in six months, and C agreed to devote his whole time and attention to the manufacture of the watch chains, and not to sell or dispose of any of them so as to interfere with the exclusive privilege secured to the defendant of purchasing the whole quantity which it might be practicable for C to make: and it was proved that the machine used by C with the knowledge and consent of the defendant, in the manufacture, was the same as that invented by the plaintiff, and that all the watch chains thus made by C were delivered to the defendant according to the contract. Held, that if the contract was real and not colorable, and if the defendant had no other connexion with C than that which grew out of the contract, the facts proved did not amount to a breach by him of the plaintiff's patent right. *Keplinger v. De Young*, 10 Wheat. 358.

170. Such a contract, connected with evidence from which the jury might legally infer, either that the machine to be employed in the manufacture of the

patented article was owned wholly or in part by defendant, or that it was hired to defendant for the time specified, under color of a sale of the articles to be manufactured with it, and with intent to invade the plaintiff's patent right, would amount to a breach of his right. *Ibid.*

171. Under the Patent act of February 21, 1793, ch. 156, if the patentee has sold out a moiety of his patent right, a joint action lies by himself and his patentee for a violation of it. *Whittemore v. Cutter*, 1 Gallis. 429.

172. If there be a mere making and no user proved, nominal damages are to be recovered. Where the law gives an action for a particular act, that doing the act imports of itself a damage: every violation of a right imports some damage, and if none other be proved, the law allows a nominal damage. *Ibid.* *Whittemore v. Cutter*, 1 Gallis. 476.

173. By the terms "actual damage," which the plaintiff may recover under the Patent law, are meant such damages as he can actually prove, and has in fact sustained, as contradistinguished from mere imaginary or vindictive damages, which in personal torts are sometimes given. *Ibid.*

174. The rule of damages, where the user of a machine is proved, should be the value of the use of such a machine during the time of the illegal user. *Ibid.*

175. In an action for a violation of a patent right, the plaintiff can recover for actual damages only, and not for a vindictive recompense. *Ibid.*

176. Where merely the making of the machine is proved, as no actual damages have been sustained, the jury should give only nominal damages. *Ibid.*

177. The jury are to estimate the plaintiff's single damages, and the court will treble them in awarding the judgment. *Ibid.* *Gray and Osgood v. James*, 1 Peters' C. C. R. 394.

178. The sale of the materials of a patented machine by the sheriff, on an execution against the owner, is not such a sale as subjects the sheriff to an action for an infringement of the patent right under the Patent act of April 17, 1800, ch. 179. *Sawin et al. v. Guild*, 1 Gallis. 485.

179. The making of a patented machine to be an offence within the purview of the Patent act, must be the making with intent to use for profit, and not for the mere purpose of philosophical experiment, or to ascertain the verity and exactness of the specification. *Ibid.* See, also, *Whittemore v. Cutter*, 1 Gallis. 478.

180. In an action for the infringement of a patent right, the law gives to the plaintiff treble the actual damages sustained by him: and the rule is to allow him treble the amount of the profits actually received by the defendant, in consequence of his using the plaintiff's invention. *Lowell v. Lewis*, 1 Mason, 182.

181. The jury are to find the single damages, and the court to treble them in awarding judgment. *Gray et al. v. James et al.*, 1 Peters' C. C. R. 394.

182. The statute declares it to be a good defence to an action for the infringement of the patent right, that the thing secured by the patent was not originally discovered by the patentee, but had been in use, or had been described in some public work, anterior to the supposed discovery of the patentee. *Kneass v. The Schuylkill Bank*, 4 Wash. C. C. R. 106.

183. Any patent may be defeated by showing that the thing secured by the patent had been discovered and put into actual use prior to the discovery of the patentee, however limited the use or the knowledge of the prior discovery might have been. *Ibid.*

184. A patent may be for a new combination of machines to produce certain effects; and this whether the machines constituting the combination be new or old. But in such case, the patent being on the combination only, it is no infringement of the patent to use any of the machines separately, if the whole combination be not used. *Barret et al. v. Hall et al.*, 1 Mason, 447.

185. Where a party claims several distinct and independent improvements in the same machine, and procures a patent for them in the aggregate, he is entitled to recover against any person who shall use any one of the improvements so patented, notwithstanding there has been no violation of the other improvements. *Moody v. Fiske et al.*, 2 Mason, 112.

186. Where a patent is for a new combination of existing machinery or machines, and does not specify or claim any improvements or invention, except the combination, unless that combination is substantially violated, the patentee is not entitled to any remedy, although parts of the machinery are used by another; because the patent, by its terms, stands upon the combination only. *Ibid.*

187. The jury may, in a case for infringing a patent, give the plaintiff, as part of his actual damage, such expenses for counsel fees, &c., as have been necessarily incurred in vindicating the plaintiff's right by a suit, and which are not taxable in the bill of costs. *Boston Manufacturing Company v. Fiske et al.*, 2 Mason, 119.

188. Where the patentee grants the machine, or agrees to deliver it, he cannot recover damages for the use of it against his grantee; for the agreement implies necessarily the right to use it in any manner the grantee pleases, or to rent it to another. *Gray et al. v. James et al.*, 1 Peters' C. C. R. 394.

189. Where a suit is brought against A and B for the infringement of a patent right, the plaintiff may recover against one, though no proof is given against the other; for all torts are joint and several, and plaintiff may recover against one defendant, though the other be acquitted. *Ibid.*

190. In order to entitle the plaintiff to recover for a violation of his patent right, the fact must be made out to the satisfaction of the jury, that he was the original inventor in relation to every part of the world: nor is it material, provided the same invention had been previously made any where else, that the plaintiff knew of such prior discovery. *Dawson v. Follen*, 2 Wash. C. C. R. 311.

191. Under the act of Congress of January 21, 1808, ch. 117, and a patent taken out pursuant to it, Oliver Evans might recover damages for the use of a machine violating his patent, after notice of the patent, although the machine might have been constructed prior to the passing of the law. *Evans v. Weiss*, 2 Wash. C. C. R. 342. 3 Hall's Am. L. Journ. 108, S. C.

192. Under the general Patent law, the plaintiff has a right to recover against a person who erected a machine prior to the issuing of a patent, and made use of it afterwards. *Ibid.*

193. The patentee of an invention, notwithstanding he had given the benefit of his invention to another, may recover for the violation of his patent, not having assigned away his whole title and interest in it, and no deed of assignment having been recorded in the office of the Secretary of State. *Park v. Little et al.*, 3 Wash. C. C. R. 196.

194. It is not a defence that the plaintiff was not himself the original projector of the improvement, if the patent was taken out with the knowledge and assent of the original projector, and not in fraud of his right. *Dixon v. Moyer*, 4 Wash. C. C. R. 68.

195. The plaintiff must in all cases prove an infringement of his right subsequent to the date of his application, or patent; but if the defendant attempts to avoid the patent, by showing that the plaintiff was not the original discoverer, the patent will be considered as relating back to the original discovery. *Ibid.*

196. It lies on the defendant to show that some other person than the patentee was the original inventor, it is the point of his defence, and he must substantiate it. *Ibid.*

197. One who has obtained a patent for a combination cannot recover in an action against one for using one of the known machines of which the combination is formed. *Evans v. Eaton*, 1 Peters' C. C. R. 322.

198. Where the plaintiff claimed the combination of three things, as his invention, in a patent for an improvement in the construction of ploughs, it was held, that the patent was for the entire combination of the three, and not for a combination of any two of them; and, therefore, it was no infringement of the patent to construct ploughs containing two of them. *Prouty v. Draper*, 1 Story, 568.

199. If the defendants use a substantial part of the invention patented, although with some modifications of form or apparatus, that is a violation of the patent right. So, if the patent be of two machines, and each is a new invention, and the defendant use only one of the machines. *Wyeth v. Stone*, 1 Story, 273.

200. Where a patent was taken out for a combination and an entire process, it was held, that the use of a part of the process and combination was not an infringement thereof. *Howe v. Abbott*, 2 Story, 190.

201. In causes for violation of a patent, the jury are at liberty to give such reasonable damages as shall vindicate the rights of the patentee, and shall indemnify him for all expenditures necessarily accrued in the suit beyond what the taxable costs will repay. *Pearson v. The Eagle Screw Co.*, 3 Story, 402.

202. The plaintiffs, in the circuit court, claimed damages for the infringement of their patent for a "new and useful improvement in the construction of a plough." The claim of the patentees was for the combination of certain parts of the plough, not for the parts separately. The circuit court charged the jury, that unless it is proved that the whole combination is substantially used in the defendant's ploughs, it is not a violation of the plaintiff's patent; although one or more of the parts specified in the letters patent may be used in combination by the defendant. The plaintiffs, by their specification and summing up, treated the parts described as essential parts of their combination, for the purpose of brace and draught; and the use of either alone by the defendant would not be an infringement of the combination patented. Held that the instructions of the circuit court were correct. *Prouty v. Ruggles*, 16 Peters', 336.

203. The patent is for a combination, and the improvement consists in arranging different portions of the plough, and combining them together in the manner stated in the specification, for the purpose of producing a certain effect. None of the parts referred to are new, and none are claimed as new; nor is any portion of the combination less than the whole claimed as new, or stated to produce any given result. The end in view is proposed to be accomplished by the union of all, arranged and combined together in the manner described; and this combination, composed of all the parts mentioned in the specification, and arranged with reference to each other, and to other parts of the plough, in the manner therein described, is stated to be the improvement, and is the thing patented. The use of any two of these parts only, or of two combined with a third, which is substantially different in the form, or in the manner of its arrangement and connection with the others, is, therefore, not the thing patented. It is not the same combination, if it substantially differs from it in any of its parts. *Ibid.*

204. An assignee of an exclusive right to use two machines within a particular district can maintain an action for an infringement of the patent within that district, even against the patentee. *Stimpson v. Westchester Railroad Co.*, 4 Howard, 380.

205. An assignment of an exclusive right to use a machine, and to vend the same to others for use, within a specified territory, authorizes the assignee to

vend elsewhere, out of the said territory, the product of said machine. *Stimpson v. Wilson*, 4 Howard, 709.

206. The restriction upon the assignee is only that he shall use the machine within the specified territory. There is none as to the sale of the product. *Ibid.*

207. The decision of the court in the two preceding cases, namely, that where a patent is renewed under the act of 1836, an assignee under the old patent has a right to continue the use of the machine which he is using at the time of the renewal, again affirmed. *Wilson v. Turner*, 4 Howard, 712.

208. An objection to the validity of Woodworth's patent for a planing machine, namely, that he was not the first and original inventor thereof, is not sustained by the evidence offered in this case. *Woodworth v. Wilson*, 4 Howard, 712.

209. Nor is the objection well founded, that the specifications accompanying the application for a patent are not sufficiently full and explicit, so as to enable a mechanic of ordinary skill to build a machine. *Ibid.*

210. The sale of the product of a patented machine is not an infringement of the right. *Boyd v. McAlpen*, 3 McLean, 427.

211. But if the person who sells is connected with the use of the machine, it may be an infringement. *Ibid.*

212. Woodworth's right consists of a combination of known mechanical powers. *Ibid.*

213. The use of any part of these, less than the whole, is no infringement. *Ibid.*

214. A patent right is infringed, by making the thing patented, though employed by another to do so. *Boyce v. Dorr*, 3 McLean, 582.

215. But where the thing was made without the knowledge of its having been patented, more than nominal damages should not be given. *Ibid.*

216. To indemnify a patentee in damages, the jury may allow actual cost and counsel fees, if reasonable in amount; and this court, under the act of Congress, will award treble what is found by the jury, if deemed proper to protect useful inventors from combinations and ruin. *By Justice Woodbury in Allen v. Blunt*, U. S. C. C. Mass. district, Nov. term, 1846.

217. A court will not set aside a verdict for alleged excessive damages, unless they are large and palpably unreasonable. *Ibid.*

218. The provisions of the 6th section of the act of 21st February, 1793, are intended to declare the defence that shall be available to a party charged by a patentee with a violation of his right. *Delano v. Scott*, Gilpin, 489.

219. The prior knowledge and use of an invention which avoids a patent relates to the time of the application, not the discovery; and to public use, with the knowledge and privity of the patentee, not to a private or surreptitious use, in fraud of the patent. *Whitney v. Emmett*, 1 Bald. 303.

220. If the application is made in a reasonable time after the discovery, an intermediate knowledge or use will not, of itself, affect the patent. The invention, however, must be new to all the world. *Ibid.*

221. If the patent is broader than the invention, or if it is not sufficiently descriptive, taken in connection with the specification, the plaintiff cannot recover in an action for its violation. If, however, the patent is too broad in its general terms, it may be limited by a surrender and a disclaimer, if they show the thing intended to be patented, and that no claim is made to any thing before known or used. *Whitney v. Emmett*, 1 Bald. 303.

222. In an action, in the circuit court of the United States, for the violation of a patent, the court cannot give judgment declaring the patent void, only in the cases provided for in the 6th section of the act of 1793. If the patent is defective for any other cause, the court can only render judgment generally for the defendant. *Ibid.*

223. A mere workman, employed by a person who is not the patentee to make parts of a patented machine, is not liable to a penalty, under the statute of 21st of February, 1793. *Delano v. Scott, Gilpin*, 489.

IV. *Of the proceedings and pleadings in actions for violations of Patent rights.*

224. In the case of a rule before the district judge to show cause why a patent shall not be repealed, a record is to be made of the proceedings antecedent to the rule to show cause why process should not issue to repeal the patent, and upon which the rule is founded. *Ex parte Wood*, 9 Wheat. 603.

225. Under the Patent act of February 21, 1793, ch. 156, if the patentee has sold out a moiety of his patent right, a joint action lies by himself and his patentee for a violation of it. *Whittemore v. Cutter*, 1 Gallis. 429.

226. The proceedings under the tenth section of the Patent act of February 21, 1793, ch. 156, are in the nature of a scire facias at common law to repeal a patent. *Stearns v. Barret*, 1 Mason, 153.

227. Upon a judgment rendered in the district court on such a suit, error lies to the circuit court. *Ibid.*

228. The scire facias in such case ought to contain a direct allegation or suggestion that the patent was obtained surreptitiously or upon false suggestion, and to call upon the defendant, for that cause only, to show cause why the patent should not be repealed. *Ibid.*

229. On an application for an injunction to restrain the infringement of a patent right, it should be stated, in the bill or by affidavit, that the complainant is the inventor, and the bill must be sworn to: it is not sufficient that this fact was sworn to when the patent was obtained. *Sullivan v. Redfield et al.*, 1 Paine, 441.

230. To obtain the injunction, the case should be such as to leave little if any doubt in the mind of the court as to the validity of the patent; especially if it rests upon the complainant's own showing, without any opposing testimony. *Ibid.*

231. The act of February 15th, 1819, c. 430, does not alter the principles on which injunctions are issued, but merely extends the jurisdiction of the circuit courts to parties to whom it did not before extend. *Ibid.*

232. The established rules which govern courts of equity on such applications are, that where there has been an exclusive possession of some duration under the patent, an injunction will be granted without putting the party previously to establish the validity of his patent at law; but when the patent is recent, and it is attempted to be shown that the specification is bad, or otherwise that the patent ought not to have been granted, the court will not take the decision upon itself, but will send the party to establish his patent at law. *Ibid.*

233. In an action for the violation of a patent right, the declaration need not aver that the preliminary steps to obtain a patent were taken; because, if it aver that the patent was granted in the form prescribed by law, the court, upon demurrer, will presume that every thing was rightly done to obtain it. *Executors of Fulton v. Myers*, 4 Wash. C. C. R.

234. But it is fatal, on general demurrer, if the declaration omit to aver that a patent did issue; it is not sufficient to allege it was made out in due form, under the seal and in the name of the United States, by which there was granted, &c. The law prescribes that the patent so made out shall be delivered to the petitioner, and that no person can receive it till he has taken the oath and made the disclosure required in the second section. *Ibid.*

235. It is necessary to aver the attestation of the President, and it is not to be presumed from the foregoing general allegation. *Ibid.*

236. The certificate of the attorney general forms no part of the patent. *Ibid.*

237. It is not necessary that the declaration should particularly designate in what the improvement consists; it is sufficient that the breach stated be as broad as the right set forth in the declaration and granted in the patent. *Ibid.*

238. In an action for the violation of a patent, where the patent and specification are so ambiguous as to leave it uncertain whether the grant is for an improvement in the making a certain instrument, or in the mode of using it, the affidavit may be referred to for the purpose of explanation. *Pettibone v. Derriuger*, 4 Wash. C. C. R. 215.

239. An action for the violation of a patent right may be sustained against a corporation, if, when acting in that character, it directs an act to be done which infringes the patent. *Kneass v. The Schuylkill Bank*, 4 Wash. C. C. R. 9, 106.

240. Upon a plea of not guilty, the plaintiff must prove, not only that the defendant has made a machine, but that it substantially resembles that for which the plaintiff had a patent. *Dixon v. Moyer*, 4 Wash. C. C. R. 68.

241. In patent causes, the rule is to grant an injunction on filing of the bill and before a trial at law, if the bill state a clear right, and verifies it by affidavit. *Isaacs v. Cooper*, 4 Wash. C. C. R. 259.

242. If it state an exclusive possession of the invention, the injunction is granted, though the court may entertain doubts as to the validity of the patent. *Ibid.*

243. But if there be glaring defects in the patent or specification, it is refused. *Ibid.*

244. Where the patent is modern, and objections are made to the patent or specification, the court will not act till the right is established by law, which the court will order. *Ibid.*

245. If the bill does not set forth a possession by the plaintiff of his invention at any particular time, it is defective. *Ibid.*

246. If the answer denies that the defendant uses the plaintiff's invention, the injunction will be refused. *Ibid.*

247. In an action for the violation of a patent right, it is sufficient, under the plea of the general issue, for the defendant to give notice that the plaintiff is not the inventor of the machine for which the patent is obtained, if that constitutes the defence, without stating in the defence who was the inventor, or who had previously used the machine. *Evans v. Kremer*, 1 Peters' C. C. R. 215.

248. If in such notice the defendant specifies some persons who used the machine, he may prove the use of it by others not named in the notice. *Ibid.*

249. There being no act of Congress conferring on the circuit courts of the United States a right to take cognizance, as a court of equity, of a case under the Patent law, between citizens of the same State, that court cannot take cognizance of such a cause. *Livingston et al. v. Van Ingen et al.*, 4 Hall's Am. L. Journ. 56.

250. The assignee of a patent right, in part or in whole, cannot maintain any suit at law, or in equity, either as a sole or as a joint plaintiff therein, at least as against third persons, until his patent has been recorded in the proper department, according to the requisitions of the Patent Acts. *Wyeth v. Stone*, 1 Story, 273.

251. The decision of the Commissioner of Patents is conclusive as to the laws and facts arising under an application for a patent, unless it be impeached for fraud or connivance between him and the patentee; or unless his excess of authority be manifest on the face of the papers. *Allen v. Blunt*, 3 Story, 740.

252. An injunction granted on an original bill, before the surrender of a patent, cannot be maintained upon the new patent, unless a supplemental bill be filed, founded thereon. *Woodworth v. Stone*, 3 Story, 749.

253. To support an action at law for the breach of a patent, it is indispensable to prove a breach before the action is brought; but, if the patent right be admitted or established, a bill in equity *quia timet* will lie for an injunction, upon well grounded proof of any apprehended intention of the defendant to violate it. *Ibid.*

254. The meaning of technical words of art in commerce and manufactures, used in a patent, as well as the surrounding circumstances, which may materially affect their meaning, are to be interpreted by the jury. *Washburn v. Gould*, 3 Story, 122.

255. Every instrument is to be interpreted by a consideration of *all* its provisions, and its obvious design is not to be controlled by the precise force of single words. *Ibid.*

256. Where a grant was made of a right to construct and use fifty machines within certain localities, reserving to the grantor the right to construct, and to license others to construct, but not to use them therein, *it was held*, that the grant was of an exclusive right under the statute of 1836, in regard to patents, and that suits were to be brought in the name of the assignees, even though agreed to be at the expense of the grantor. *Ibid.*

257. Where a patent has been granted, and there has been an exclusive possession of some duration under a patent, an injunction will be granted, without obliging the patentee previously to establish the validity of his patent by an action at law. But it is otherwise, if the patent be recent, and the injunction be resisted on the ground that the patent ought not to have been granted, or is imperfectly stated in the specification. *Ibid.*

258. *Held*, that the patent in the present case was, upon the true interpretation of the specification, a patent for an improved machine. *Ibid.*

259. In this circuit the practice in patent cases has not been to require the plaintiff to give security for costs. *Woodworth v. Sherman*, 3 Story, 171.

260. A motion having been made in arrest of judgment in this case, on the ground that no description of the patent was set forth in the declaration, *it was held*, that the profert of the letters patent made them, when produced, a part of the declaration, and gave the invention all the requisite certainty. *Pitts v. Whitman*, 2 Story, 609.

261. An assignee of part of a patent right cannot maintain an action on the case for the violation of the patent. *Tyler et al. v. Tuel*, 6 Cranch, 324.

262. If the declaration upon an assignment of a patent right omit to state that the assignment has been duly recorded in the State Department, the defect is cured by a verdict for the plaintiff. *Dobson v. Campbell*, 1 Sumner, 319.

263. Patents and specifications annexed thereto should be construed fairly and liberally, and not subjected to any over-nice or critical refinements. *Ames v. Howard*, 1 Sumner, 482.

264. *Semble*, that no previous notice or claim of a right to the exclusive use of an invention is necessary to enable a patentee to maintain an action for an alleged violation of his patent right. *Ames v. Howard*, 1 Sumner, 482.

265. It is obvious, that many of the provisions of our Patent act are derived from the principles and practice which have prevailed in the construction of the law of England in relation to patents. *Pennock et al. v. Dialogue*, 2 Peters', 18.

266. Where English statutes, such for instance as the statute of frauds, and the statute of limitations, have been adopted into our own legislation, the known and settled construction of those statutes, by courts of law, has been

considered as silently incorporated into the acts; or has been received with all the weight of authority. This is not the case with the English statute of monopolies, which contains an exception, on which the grants of patents for inventions have issued in that country. The language of that clause in the statute is not identical with the Patent law of the United States; but the construction of it adopted by the English courts, and the principles and practice which have long regulated the grants of their patents, as they must have been known, and are tacitly referred to in some of the provisions of our own statute, afford materials to illustrate it. *Ibid*, 18.

267. The defendant in the Circuit Court, in his plea, assigned the particular defect supposed to exist in the specification, and then proceeded to answer in the very words of the act, that it does not contain a written description of the plaintiff's invention and improvement, and manner of using it, in such full, clear, and exact terms, as to distinguish the same from all other things before known, so as to enable any person skilled in the art to make and use the same. The plea alleged, in the words of the act, that the prerequisites to issuing a patent had not been complied with. The plaintiffs denied the facts alleged in the plea, and on this issue was joined. At the trial, the counsel for the defendants, after the evidence was closed, asked the Court to instruct the jury, that if they should be of opinion that the defendants had maintained and proved the facts alleged in their pleas, they must find for the defendants. The Court refused this instruction, and instructed the jury that the patent would not be void on this ground, unless such defective or imperfect specification or description arose from design, or for the purpose of deceiving the public. By the Court: The instruction was erroneous, and the judgment of the Circuit Court ought to be reversed. *Grant et al. v. Raymond*, 6 Peters', 218.

268. Courts did not, perhaps, at first sight, distinguish clearly between a defence which would authorize a verdict and judgment in favor of a defendant in an action for the violation of a patent, leaving the plaintiff free to use his patent, and to bring other suits for its infringement; and one which, if successful, would require the Court to enter a judgment not only for the defendant in the particular case, but one which declares the patent to be void. This distinction is now well settled. *Ibid*.

269. If the party is content with defending himself, he may either plead specially, or plead the general issue, and give the notice required by the sixth section, of any special matter he means to use at the trial. If he shows that the patentee has failed in any of those prerequisites on which the authority to issue the patent is made to depend, his defence is complete. He is entitled to the verdict of the jury, and the judgment of the Court. But if, not content with defending himself, he seeks to annul the patent, he must proceed in precise conformity with the sixth section. If he depends on evidence "tending to prove that the specification filed by the plaintiff does not contain the whole truth relative to his discovery, or that it contains more than is necessary to produce the desired effect," it may avail him so far as respects himself, but will not justify a judgment declaring the patent void; unless "such concealment or addition shall fully appear to have been made for the purpose of deceiving the public;" which purpose must be found by the jury, to justify a judgment of vacatur. *Ibid*.

270. The defendant is permitted to proceed according to the sixth section, but is not prohibited from proceeding in the usual manner, so far as respects his defence; except that special matter may not be given in evidence on the general issue unaccompanied by the notice which the sixth section requires. The sixth section is not understood to control the third. The evidence of fraudulent intent is required only in the particular case, and for the particular purpose stated in the sixth section. *Ibid*.

271. Action for an alleged violation of a patent for an improvement in guns and fire arms. *Shaw v. Cooper*, 7 Peters', 202.

272. The 14th and 15th sections of the act of 1836, c. 357, prescribe the rules which must govern on the trial of actions for the violations of patent rights; and these sections are operative, so far as they are applicable, notwithstanding the patent may have been granted before the passage of the act of 1836. *McCharg et als. v. Kingsland et als.*, 1 Howard, 202.

273. A plaintiff, therefore, who claims under an assignment from the administrator, can maintain a suit against a person who claims under the covenant. *Wilson v. Rousseau*, 4 Howard, 646.

274. An assignee of the exclusive right to use ten machines within the city of Louisville, or ten miles round, may join his assignor with him in a suit for a violation of the patent right, under the circumstances of this case. *Woodworth v. Wilson*, 4 Howard, 712.

275. In a suit in equity for the violation of a patent right, an injunction will not be granted before a hearing upon the merits, merely upon proof that the complainant has obtained a patent. *Orr v. Littlefield*, 1 Woodbury, 13.

276. But proof of undisturbed possession and user of the patent right, for reasonable length of time, by the complainant, is ground for granting an injunction. *Ibid.*

277. It is also ground for granting an injunction, that the complainant has prosecuted other persons for violations of the same patent, and recovered judgment against them; and it makes no difference that such judgment was rendered by agreement of parties, where there was no collusion, or under a specification of this patent, which has been surrendered as defective, and a new one taken out. *Ibid.*

278. An injunction will not be dissolved, as a matter of course, on the coming in of the answer, denying the equity of the bill, if the complainant has adduced auxiliary evidence of his right, as in the present case. *Ibid.*

279. Injunctions cannot be granted in the courts of the United States, without notice, and hence all of them here are special. If the title of the complainant is denied, he must show former recoveries, or long possession, in the case of patents; and in case of waste and trespass, that there are no facts to warrant the denial, or the injunction will be refused till the disputed questions of title are settled at law. *Perry v. Parker*, 1 Woodbury, 280.

280. Where a bill in chancery asks for an injunction against the use of a patent stove, and for an account of sales, and on proof of former recoveries of others and long possession, an injunction had been granted, the court will not dissolve it merely on an answer denying the validity of the patent; but will, if requested, direct an issue to be tried at law on that point; or, if not requested, continue the injunction and dissolve it at the next term, if in the mean time a suit at law is not brought to test the title. *Orr v. Merrill*, 1 Woodbury, 376.

281. An answer is sufficient for this purpose, though it do not set out the names of the persons who used the stove patented, or knew it before the patentee did; nor the names of the places where it was used or known. *Ibid.*

282. But the answer at law should set them out, and so should the answer and notice on which in chancery an issue is asked to be formed and tried at law. *Ibid.*

283. An injunction once granted will not be dissolved on account of any doubts as to the validity of a new patent in such cases, caused by the errors of such officers, if measures are pending in Congress to remove them by legislation. *Woodworth v. Hall*, 1 Woodbury, 389.

284. An injunction will not be issued against a respondent's using a machine, unless it is proved that he has used it himself, or employed others to use it

for him, or at least has profited by the use of it. *Woodworth v. Hall*, 1 Woodbury, 248.

285. Where long possession of a patent has existed, and frequent recoveries under it, an injunction will be issued, the originality of the invention by the patentee not being denied, unless the letters appear, for some cause, illegal or void. *Ibid.*

286. Where a bill is filed for an injunction against the use of a patent, and the answer denies the use of it, and also the originality of the invention, if the denial is supported by affidavits bringing the originality of the invention into doubt, an injunction will not issue till the parties settle the right in an action, which is pending between them at law, for a violation of the patent, unless the complainant shows, that he has for some time been in the undisturbed use and sale of his patent, or has recovered damages against others for the use of it. *Hovey v. Stevens*, 1 Woodbury, 290.

287. Nor can a patent be aided in respect to such an use or such recoveries, if it be one useful in respect to another patent for another invention, where such an use and such recoveries have been had, unless it is connected in law with that patent and is a part of it. *Ibid.*

288. The court will not enjoin the sale of a similar article under the same patent, in a particular district assigned to an individual, though manufactured in a different district. *Boyd v. Brown*, 3 McLean, 295.

289. Where license to run a machine patented has been abandoned, the holder of the right may file his bill to enjoin the defendant. *Brook v. Stolley*, 3 McLean, 523.

290. The license being conditional, if set up by the defendant, he must show a performance of the conditions on his part. *Ibid.*

291. If the counsel assert that in his argument he expressed a wish for the Court to instruct the jury on some points, and it was not done, but it appeared that he omitted to state verbally, after the charge had been delivered, that any point had been omitted, or that further directions were desired, a new trial will not be granted. *By Justice Woodbury, in Allen v. Blunt*, U. S. C. C. Mass. District, November term, 1846.

292. It is not the duty of the Court to instruct the jury on abstract or irrelevant questions, but only on such as arise on the evidence in the case. *Ibid.*

293. If incompetent evidence admitted became immaterial, a new trial will not be granted. *Ibid.*

294. If on the whole case, notwithstanding an erroneous ruling or instruction, the verdict does not seem to have been influenced by them, or to be against the justice of the case, a new trial will not be granted. *Ibid.*

295. A motion for an allowance of a bill of exceptions, under the authority given by the Patent act to this Court, in all cases under it, where it seems "reasonable," in order to enable the parties to carry questions contained in it to the Supreme Court, when the damages are less than \$2,000, ought to be granted, in the exercise of a sound discretion as to points which arise in the construction of the Patent law itself, where those are important in their character, and really doubtful, but as to no others. *Ibid.*

296. All proceedings in equity, authorized by the 16th section of the act of July 4th, 1836, and the 10th section of the act of March 3d, 1839, to which the Commissioner of Patents is made a party, must be commenced and prosecuted before some Court of competent jurisdiction in the District of Columbia, no tribunal out of said District having jurisdiction over the person of the Commissioner, as such, and the Patent Office. *By Judge Randall, in Prentiss v. Ellsworth*, U. S. C. C. Eastern District of Pennsylvania, October term, 1845.

297. An administrator of a patentee residing in one State may commence an

action in the U. S. District Court of another State for the recovery of damages for an infringement of the letters patent, without taking out letters of administration in the latter State. *By Judge Kane, in Smith & Sloat v. Mercer & Pechin*, U. S. C. C. Eastern District of Pennsylvania, October term, 1846.

298. The same right attaches to the assignee of such administrator. *Ibid.*

299. An absolute acquiescence by a patentee in the adverse possession and enjoyment of his rights by a stranger would, under ordinary circumstances, for a period much less than six years, offer a strong argument against the grant of an injunction before final decree. *By Judge Kane, in Sloat et al. v. Plympton et als.*, U. S. C. C. Eastern District of Pennsylvania, October term, 1846.

300. Under the patent laws, the United States are not a party, and cannot be substituted as a party, in a litigation respecting the validity of any rights claimed or denied by virtue of those laws. *Wood v. Williams*, Gilpin, 517.

301. An action of the case will lie for representations made by the defendant, knowing them to be false, as to the validity of a patent right claimed by him, whereby the plaintiff was induced to purchase. *Bull v. Pratt*, 1 Conn. 342.

V. *Of the evidence in actions for violation of Patent rights.*

302. Under the sixth section of the Patent law of February the 21st, 1793, ch. 156, the defendant pleaded the general issue, and gave notice that he would prove at the trial that the machine, for the use of which, without license, the suit was brought, had been used previous to the alleged invention of the plaintiff, at several places which were specified in the notice, or some of them, "and also at sundry other places in Pennsylvania, Maryland, and elsewhere in the United States." The defendant having given evidence as to some of the places specified, held, that evidence as to other places, not specified, was admissible; but that the court possess the power, which will be exercised, to prevent the plaintiff from being injured by surprise. *Evans v. Eaton*, 3 Wheat. 454. 1 Peters, 322, S. C. 3 Wash. C. C. R. 408.

303. Testimony, on the part of the plaintiff, that the persons, of whose prior use of the machine the defendant had given evidence, had paid the plaintiff for licenses to use the machine since his patent, ought not to be absolutely rejected, though entitled to very little weight. *Ibid.*

304. It is no objection to the competency of a witness, in a patent cause, that he is sued in another action for an infringement of the same patent. *Evans v. Hettick*, 7 Wheat. 453.

305. The sixth section of the Patent act of February 21, 1793, ch. 156, which requires a notice of the special matter to be given in evidence by the defendant under the general issue, does not include all the matters of defence of which the defendant may avail himself: and where the question asked was, whether the machine used by the defendant was like the model exhibited in court of the plaintiff's patented machine, it was held that no notice was necessary to authorize the inquiry. *Ibid.*

306. The sixth section of the Patent act does not enumerate all the defences of which the defendant may legally avail himself: he may give in evidence that he never did the act attributed to him; that the patentee is an alien not entitled under the act; or that he has a license or authority from the patentee. *Whittemore v. Cutter*, 1 Gallis. 476.

307. It is a presumption of law that, when a patent has been obtained, and the specifications and drawings recorded in the Patent office, every person who subsequently takes out a patent for a similar machine has a knowledge of the preceding patent. *Odiome v. Winkley*, 2 Gallis. 51.

308. In this proceeding the defendant's possession of the patent is so far prima facie evidence of his right, as that the onus probandi is cast on the plain-

tiff, who is bound to prove that the patent was obtained surreptitiously or upon false suggestion. *Stearnes v. Barrett*, 1 Mason, 153.

309. If a patent has been obtained by the plaintiff upon the defendant's refusal to submit to an arbitration, according to the ninth section of the act of February 21, 1793, ch. 156, and the defendant subsequently obtain a patent for the same invention, this is not conclusive proof that the latter was obtained surreptitiously, or upon false suggestion. *Ibid.*

310. The first inventor, who has put the invention in practice, and only he, is entitled to a patent. Every subsequent patentee, although an original inventor, may be defeated of his patent right, upon proof of such prior invention being put into use. *Kneass v. The Schuylkill Bank*, 4 Wash. C. C. R. 9, 106.

311. In an action for the violation of a patent, the defendant, under the general issue, without notice of the special matter, may give in evidence the act of Congress respecting patents, as well as some other matters than those enumerated in the sixth section; such as alienage of plaintiff, and license by him to use the invention. But he cannot give in evidence that the invention is not new; nor can that circumstance, however apparent, be judicially noticed by the jury. *Ibid.*

312. Under the general issue defendant cannot give evidence of any of the grounds of defence enumerated in the sixth section, but he may make objections to the validity of the patent of a different kind; such as, the want of a specification or written description as required by the third section, or a specification ambiguous and unintelligible, which is the same as no specification. *Ibid.*

313. Under a notice that the defendant will prove the prior use of the machine in the United States, he will not be permitted to give evidence of a prior use in England. *Dixon v. Moyer*, 4 Wash. C. C. R. 68.

314. There is no limitation to the period in which the defendant, under the general issue, may give in evidence that the patentee was not the original inventor. *Evans v. Eaton*, 1 Peters' C. C. R. 322.

315. In an action for an infringement of a patent right, evidence that the invention of the defendant is better than that of the plaintiff is improper, except to show a substantial difference between the two inventions. *Alden v. Dewey*, 1 Story, 336.

316. Where the defendant offered evidence to show that the invention was not original with the plaintiff, but that the improvement for which he had taken out letters patent had been suggested to him, although the precise mode of carrying it into operation had not been suggested, the court instructed the jury, that the true question was, whether the improvement was substantially communicated to the plaintiff, so that, without more inventive power, he could have applied it, or not. *Ibid.*

317. In considering the question of the originality of an invention, the oath of the inventor, made prior to the issue of the letters patent, that he was the true and first inventor of the improvement, may be opposed to the oath of a witness in the case, whose testimony is offered to show that the invention was not original. *Ibid.*

318. It is immaterial whether an assignment of a patent, offered in evidence, was recorded before or after the suit was brought. *Pitts v. Whitman*, 2 Story, 609.

319. Objections, that a patented invention is old; or that the specification in a patent does not clearly describe the mode of making the machine; or that the original and the renewed patent are not for the same invention; or that either were obtained with a fraudulent intent; all involve matters of fact, and are for the jury, upon the evidence, to decide. *Carver v. Braintree Manufacturing Co.*, 2 Story, 432.

320. The Patent act contemplates two classes of persons, as peculiarly appropriate witnesses in patent cases, viz.—1st. Practical mechanics, to determine the sufficiency of the specification as to the mode of constructing, compounding, and using the patent. 2d. Scientific and theoretic mechanics, to determine whether the patented thing is substantially new in its structure and mode of operation, or a mere change of equivalents; and the second class is by far the higher and the most important of the two. *Allen v. Bunt*, 3 Story, 740.

321. Where a bill in equity was brought for an injunction against the defendants, to restrain them from using and selling a planing machine, constructed according to the specification in the plaintiff's patent, it was held, that, after the lapse of time which had occurred since the patent was granted, taken together with the other circumstances of the case, the affidavit of a single witness was not sufficient to outweigh the oath of the patentee, and the general presumption arising from the grant of the letters patent. *Woodworth v. Sherman*, 3 Story, 171.

322. On the 26th September, 1835, a second patent was granted, the original patent, granted in 1831, having been surrendered and cancelled on account of a defective specification; the second patent being for fourteen years from the date of the original patent. The second patent was in the precise form of the original, except the recital of the fact, that the former patent was cancelled "on account of a defective specification," and the statement of the time the second patent was to begin to run. It was objected that the second patent should not be admitted in evidence on the trial of the case, because it did not contain any recitals that the prerequisites of the act of Congress of 1836, authorizing the renewal of patents, had been complied with. Held that this objection cannot, in point of law, be maintained. The patent was issued under the great seal of the United States, and is signed by the President, and countersigned by the Secretary of State. It is a presumption of law, that all public officers, and especially such high functionaries, perform their proper official duties, until the contrary is proved. Where an act is to be done, or patent granted upon evidence and proofs to be laid before a public officer, upon which he is to decide, the fact that he has done the act, in granting the patent, is prima facie evidence that the proofs have been regularly made, and were satisfactory. No other tribunal is at liberty to re-examine or controvert the sufficiency of such proofs, when the law has made the officer the proper judge of their sufficiency and competency. *The Philadelphia and Trenton Railroad Company v. Stimpson*, 14 Peters', 448.

323. Patents for lands, equally with patents for inventions have, in courts of justice been deemed prima facie evidence that they have been regularly granted, whenever they have been produced under the great seal of the Government, without any recitals or proofs that the prerequisites of the acts under which they have been issued have been duly observed. In cases of patents the United States have gone one step further; and as the patentee is required to make oath that he is the true inventor before he can obtain a patent, the patent has been deemed a prima facie evidence that he has made the invention. *Ibid.*

324. To entitle a party to examine a witness in the patent cause, the purpose of whose testimony is to disprove the right of the patentee to the invention, by showing its use by others prior to the patent, the provisions of the Patent act of 1886, relative to notice, must be strictly complied with. *Ibid.*

325. The conversations and declarations of a patentee, merely affirming that at some former period he had invented a machine, may well be objected to. But his conversations and declarations, stating that he had made an invention, and describing its details, and explaining its operations, are properly deemed

an assertion of his right at that time as an inventor, to the extent of the facts and details which he then makes known, although not of their existence at an anterior time. Such declarations, coupled with a description of the nature and objects of the invention, are to be deemed a part of the *res gestæ*, and they are legitimate evidence that the invention was then known and claimed by him; and thus its origin may be fixed, at least as early as that period. *Ibid.*

326. It is doubtful, whether a mere change in the mode of fastening knives on a cylinder to be ground, or to fasten one instead of several, is a change in structure from an old machine sufficient to justify a patent for it. *Hovey v. Stevens*, 1 Woodbury, 290.

327. If the respondent constructed and used his machine before the complainant took out a patent for his, it is not a justification, if he had seen and copied an improvement from the complainants. *Ibid.*

328. Declarations of a party, made before dispute arose, in connection with acts, may be competent evidence for him, as tending to show what intentions then existed. *Hovey v. Stevens*, 1 Woodbury, 290.

329. Where Congress granted an extension of the term to an administrator, it was held to be legal, and that the letters of administration need not be produced after such a grant. *Woodworth v. Hall*, 1 Woodbury, 248.

330. A signature to the patent, and a certificate of copies, by a person calling himself "acting commissioner," is sufficient on its face in controversies between the patentee and third persons, as the law recognises an acting commissioner to be lawful. *Ibid.*

331. Where evidence is offered to prove, that the "acting commissioner," who signs a patent, was not appointed by the President, it is questionable whether it be competent to admit it in controversies where he is not a party. *Woodworth v. Hall*, 1 Woodbury, 389.

332. Under the patent law of 1836, the chief clerk is held to be the "acting commissioner," as well in the necessary absence of the head of the office, as in case of a vacancy *de jure*. *Ibid.*

333. Where witnesses differ as to the fact of an infringement, an issue should be directed, or an action at law commenced. *Brooks & Morris v. Jenkins et al.* 3 McLean, 250.

334. Though the competency of an official letter from the Commissioner of the Patent Office, as evidence, may be questionable, yet if subsequent evidence in the progress of the case rendered it unnecessary to prove the fact for which it was offered, a new trial will not be granted on account of the admission of such letter. *By Justice Woodbury in Allen v. Blunt et al.*, U. S. C. C., Mass. district, Nov. term, 1846.

335. Nor where parol evidence of the contents of a letter was rejected, because no satisfactory proof had been furnished of the loss of the letter, or that it had come to the possession of the opposite party. *Ibid.*

336. In a question of fact, addressed to the court, to lay the foundation of secondary evidence of a written paper, a letter will not be presumed to have been received, from the fact that it was put into the post office, if no answer was returned, and the party to whom it was addressed makes affidavit that it never came to hand. *Ibid.*

337. A former verdict between the parties, on an issue out of chancery, and on a different matter, cannot be admitted as evidence. *Ibid.*

338. A deposition should not be taken during the session of the court at which the case is to be tried, except by its order of court, or the consent of parties, or taken merely *de bene esse* in case of death or absence abroad. *Ibid.*

339. Where counsel have acted publicly in former trials of a like cause between the parties, and are still employed, though not one of the counsel whose

names appear on the record, if living within a hundred miles of the place where the deposition was taken, and the party and the other counsel do not, he ought to be notified. *Ibid.*

340. A renewal of a patent by a Commissioner with an amended specification is to be presumed to have been made legally; but the presumption may be rebutted by evidence submitted to a jury, if requested. *Ibid.*

341. Where the defendant, in a prima facie case against him, undertakes to show that an invention has been known and used, &c., he must turn the scale of evidence in his favor. * *Ibid.*

342. An exemplification of a patent afterwards surrendered and cancelled may be given in evidence to show that an improvement subsequently patented is not original. *Delano v. Scott*, Gilpin, 489.

343. In an action for fraud in the sale of a patent, on the ground that A had a prior patent for the same invention, the defendant offered in evidence a written agreement with A, for a valuable consideration, that neither A nor his heirs would thereafter sue or disturb the defendant for a breach of A's patent right, but that the defendant, without molestation, might freely act under his patent right as if A's had never existed. It was held, that this agreement gave to the defendant no right to transfer, and could not be admitted in evidence. *Bull v. Pratt*, 1 Conn. 342.

344. In an action on the case for fraud in the sale of a patent right, the plaintiff proved that a certain patent had been granted previously to a third person, and then offered parol evidence to show that the defendant's patent was for the same invention. It was held admissible. *Ibid.*

VI. Of the surrender and re-issue of letters patent.

345. One who has patented his invention, cannot take out a new patent for the same invention, until the first is surrendered, repealed, or declared void. *Morris v. Huntingdon*, 1 Paine, 348.

346. The obstacle of an invalid patent may be removed by having it declared void after a verdict against it, or by having a vacatur entered ex parte in the Department of State, on a surrender of the patent. But the provisions of the sixth section of the act do not enable a patentee to declare his own patent void; and a verdict in a suit on the second patent, in favor of such patent, does not avoid the first patent. *Ibid.*

347. It seems, that on surrendering a patent and taking out a new one, the latter should be only for the unexpired part of the fourteen years since obtaining the first patent. *Ibid.*

348. Under the act of 1836, a corrected patent has relation back to the emanation of the defective patent. *Stanley v. Whipple*, 2 McLean, 35.

349. In such case, a contract to sell the right is made good by the second patent. *Ibid.*

350. The Patent act of 1836, ch. 357, sect. 13, and the act of 1837, ch. 45, sect. 8, authorizing the re-issue of a patent, because of a defective or redundant specification or description, without fraud, or for the purpose of adding thereto an improvement, do not require the patentee to claim, in his renewed patent, all things which were claimed in his original patent, but gives him the privilege of retaining whatever he deems proper. *Carver v. Braintree Manufacturing Co.*, 2 Story, 432.

351. A patentee cannot, by a surrender of his patent, affect the rights of third persons, to whom he has previously assigned his interest in the whole or a part of the patent, unless the assignees consent to the surrender. *Woodworth v. Stone*, 3 Story, 749.

352. The decision of the Commissioner of Patents in respect to accepting a

surrender of an old patent, and granting a new one, is not re-examinable elsewhere, unless it appear on the face of the patent that he has exceeded his authority. *Ibid.*

353. Where a defect in the specification on which a patent has issued arose from inadvertence or mistake, and without any fraud or misconduct on the part of the patentee, the Secretary of State has authority to accept a surrender of the patent, and cancel the record thereof; whereupon he may issue a new patent, on an amended specification, for the unexpired part of the fourteen years granted under the first patent. *Grant et al. v. Raymond*, 6 Peters', 218.

354. The great object and intention of the act is to secure to the public the advantages to be derived from the discoveries of individuals; and the means it employs are the compensation made to those individuals for the time and labor devoted to those discoveries, by the exclusive right to make up and sell the things discovered for a limited time. That which gives complete effect to this object and intention, by employing the same means for the correction of inadvertent error which are directed in the first instance, cannot be a departure from the spirit and character of the act. *Ibid.*

355. Quære: What would be the effect of a second patent, issued after an innocent mistake in the specification, on those who, skilled in the art for which it was granted, perceiving the variance between the specifications and the machine, had constructed, sold, and used the machine? This question is not before the Court, and is not involved in the opinion given in the case. The defence, when true in fact, may be sufficient in law, notwithstanding the validity of the new patent. *Ibid.*

356. The letters patent were obtained in 1822; and in 1829, the patentee having surrendered the same for an alleged defect in the specification, obtained another patent. This second patent is to be considered as having relation to the emanation of the patent of 1822; and not as having been issued on an original application. *Shaw v. Cooper*, 7 Peters', 202.

357. The holder of a defective patent may surrender it to the Department of State, and obtain a new one, which shall have relation to the emanation of the first. *Ibid.*

358. The case of *Grant and others v. Raymond*, 6 Peters, 220, cited and affirmed. *Ibid.*

359. A second patent granted on the surrender of a prior one being a continuation of the first, the rights of a patentee must be ascertained by the law under which the original application was made. *Ibid.*

360. Where a defective patent had been surrendered, and a new one taken out, and the patentee brought an action for a violation of his patent right, laying the infringement at a date subsequent to that of the renewed patent, proof of the use of the thing patented during the interval between the original and renewed patents will not defeat the action. *Stimpson v. West Chester Railroad Company*, 4 Howard, 380.

361. The seventh section of the act of March 3, 1839, has exclusive reference to an original application for a patent, and not to a renewal of it. *Ibid.*

362. Whether a renewed patent, after a surrender of a defective one, is substantially for a different invention, is a question for the jury, and not for the court. *Ibid.*

363. As the thirteenth section of the act of 1836 provides for the renewal of a patent, where it shall be "inoperative or invalid by reason of a defective or insufficient description or specification," "if the error shall have arisen by inadvertence, accident, or mistake, and without any fraudulent or deceptive intention," the fact of the granting of the renewed patent closes all inquiry into

the existence of inadvertence, accident, or mistake, and leaves open only the question of fraud for the jury. *Ibid.*

364. The Commissioner of Patents can lawfully receive a surrender of letters patent for a defective specification, and issue new letters patent upon an amended specification, after the expiration of the term for which the original patent was granted, and pending the existence of an extended term of seven years. Such surrender and renewal may be made at any time during such extended term. *Wilson v. Rousseau*, 4 Howard, 646.

365. A patent surrendered and renewed operates as from the commencement of the original patent, except as to causes of action arising before the renewal. *Woodworth v. Hall*, 1 Woodbury, 248.

366. If a mistake occurs in a copy of a patent, it can be corrected without causing any injury; but if it exists in the original patent, it cannot be corrected, so as to avail without the assent or re-signature of the Secretary of State. *Ibid.*

367. But the commissioner, if correcting it, need not re-sign or re-seal the letters, he being the same officer here who did it before. *Ibid.*

368. If the mistake corrected be a material one, the letters cannot operate, except on cases arising after it is made. But if a mere clerical one—*quare?* *Ibid.*

369. Where a renewal of patents surrendered is void, perhaps the surrender itself becomes also void, and the original patents remain in force. *Ibid.*

370. The sanction of the Secretary of State, to a correction of a clerical mistake in letters patent may be given in writing afterwards; and he need not resign the letters themselves. *Ibid.*, 389.

371. If the correction be of only a clerical mistake, it operates back to the original date of them, unless perhaps as to third persons, who have acquired intervening rights to be affected by the alteration. *Ibid.*

372. If a new patent, issued on a surrender of old ones, be void for any cause connected with the acts of public officers, it is questionable whether the original patents must not be considered in force till their terms expire. *Ibid.*

373. Where more is claimed than is invented; a disclaimer must be made in a reasonable time. *Boyd v. McAlpen*, 3 McLean, 427.

374. A patentee can legally take out the re-issued patent for more than is described in the surrendered one, if it does not exceed the actual discovery when the patent was taken out. *By Judges Nelson and Betts, in Benjamin et al. v. Lowlen et als.*, U. S. C. C. Southern District of New York, April term, 1846.

375. The alien claim in the 15th section, act of 1836, applies only to alien patentees, and not to American assignees. *Ibid.*

376. Held, that a surrender of the original letters patent rendered void all assignments under that patent, so far as regarded those who assented to such surrender; that the new patent, being issued to the administrator, vested in him the legal title, and therefore it was necessary that the plaintiff should have a new assignment before he could maintain an action at law for an invasion of the patent. *Gibson v. Richards*, U. S. C. C. Northern District of New York, October term, 1845.

VII. Of the extension of letters patent.

377. A legislative grant of an exclusive privilege in an invention, for a definite period, does not imply an irrevocable contract with the people, that at the expiration of the period the invention shall become their property. The legislature may revive the grant; but if they refuse to do so at the end of the period, the invention may be used by any one. *Evans v. Eaton*, 1 Peters' C. C. R. 322.

378. The extension of a patent may be granted to an administrator. *Washburn v. Gould*, 3 Story, 122.

379. The Patent act of 1836 authorizes the granting of an extended term of a patent to an administrator, as well as to the patentee. *Woodworth v. Sherman*, 3 Story, 171.

380. The assignee or grantee, under the original patent, does not acquire any right under the extended patent, unless such right be expressly conveyed to him by the patentee. *Ibid.*

381. The eighteenth section of the Patent act of 1836 authorized the extension of a patent on the application of the executor or administrator of a deceased patentee. *Wilson v. Rousseau*, 4 Howard, 646.

382. Such an extension does not inure to the benefit of assignees under the original patent, but to the benefit of the administrator (when granted to an administrator) in his capacity as such. But those assignees who were in the use of the patented machine at the time of the renewal have still a right to use it. *Ibid.*

383. The extension could be applied for and obtained by the administrator, although the original patentee had, in his lifetime, disposed of all his interest in the then existing patent. Such sale did not carry any thing beyond the term of the original patent. *Ibid.*

384. A covenant by the patentee, made prior to the law authorizing extensions, that the covenantee should have the benefit of any improvement in the machinery, or alteration or renewal of the patent, did not include the extension, by an administrator, under the act of 1836. It must be construed to include only renewals obtained upon the surrender of a patent on account of a defective specification. Parties to contracts look to established and general laws, and not to special acts of Congress. *Ibid.*

385. The decision of the Board of Commissioners, to whom the question of renewal is referred by the act of 1836, is not conclusive upon the question of their jurisdiction to act in a given case. *Ibid.*

386. The decision of the court in the preceding case of *Wilson v. Rousseau et al.*, namely, that when a patent is renewed under the act of 1836, an assignee under the old patent has a right to continue the use of the patented machine, but not to vend others, again affirmed. *Stimpson v. Wilson*, 4 Howard, 709.

387. If a patentee be dead, his administrator may renew the patent. *Brooks & Morris v. Jenkins et al.*, 3 McLean, 250

388. The board on whose judgment a patent is renewed, is not conclusive as to the right. *Ibid.*

389. After the extension of a patent, under the 18th section of the act of July 4, 1836, the original patent becomes virtually a patent for the term of twenty-one years; and then, on a surrender and re-issue, with an amended specification, the residue of the period unexpired, of the original patent, is the residue of this term. *By Judge Nelson, in Gibson v. Harris*, U. S. C. C. Northern District of New York, at Chambers, Nov. 10, 1846.

390. The patent for twenty-one years is to be regarded as the "original patent," within the meaning of the 13th section of the act of July 4th, 1836. *Ibid.*

391. If a patent extended by the Commissioners, under the 18th section of the Patent act, be further extended by Congress for seven years, the extended patent becomes a patent for twenty-eight years, instead of the twenty-one years, and may be surrendered and re-issued with an amended specification. *Ibid.*

392. The provisions of the 18th section of the act of July 4th, 1836, relating to extensions, applies as well to patents granted before the passage of that act, as to those which have been granted since. *Wilson v. Turner et al.*, U. S. C. C. District of Maryland, November term, 1844.

393. The benefits of an extension enure to the assignees of the patentee, as well as to the patentee himself. *Ibid.*

VIII. Of the repeal of letters patent.

394. Under the tenth section of the Patent act of February 21st, 1793, ch. 156, upon granting a rule by the judge of the district court upon the patentee, to show cause why process should not issue to repeal the patent, the patent is not repealed de facto, by making the rule absolute: but the process to be awarded is in the nature of a *scire facias* at common law to the patentee, to show cause why the patent should not be repealed with costs of suit; and upon the return of such process, duly served, he proceeds to try the cause upon the pleadings filed by the parties and the issue joined thereon: if the issue be an issue in fact, the trial is to be by a jury; if of law, then by the court. *Ex parte Wood*, 9 Wheat., 603.

395. In such a case, a record is to be made of the proceedings antecedent to the rule to show cause why process should not issue to repeal the patent, and upon which the rule is founded. *Ibid.*

396. The sole object of such an arbitration is to ascertain who is, *prima facie*, entitled to the patent; but when once obtained, the patent is liable to be repealed or destroyed by precisely the same process as if it had been issued without objection. *Stearns v. Barrett*, 1 Mason, 153.

397. A judgment against a patentee on a *scire facias* issued to obtain a repeal of a patent vacates the same, but a judgment in his favor will not prevent his right being contested in a suit he may subsequently institute for its violation. *Delano v. Scott*, Gilpin, 489.

IX. Of abandonment and dedication to public use.

398. Nor will the patent be protected, if the patentee was the inventor of all the material improvements in the old machine, if he suffered them to be used fully and freely by the public at large, combined with all the usual machinery; for in such case he must be deemed to have made a gift of them to the public. *Whitmore v. Cutter*, 1 Gallis, 476.

399. After a patent has been obtained for an invention or discovery, the disuse of it by the patentee is not an abandonment of the rights of the patentee to the same, but they continue for fourteen years from the date of the patent. *Gray et al. v. Johns et al.*, 1 Peters' C. C. R. 394.

400. If an inventor knowingly suffers his invention to go into public and general use without objection, it is a dedication of it to the public, and he cannot afterwards resume the exclusive right. *Melhus v. Silsbee*, 4 Mason, 108.

401. Our Patent act differs from the English in several respects. A mere public use by others before taking a patent, on a sale thereof by the inventor, is not decisive against him here as it is in England. *Ibid.* See, also, *Pennock et al. v. Dialogue*, 2 Peters, 1.

402. In a bill in equity for a perpetual injunction of the defendants, on account of an asserted violation of a patent right for an invention, it is a good defence, that prior to the granting of the patent the inventor had allowed the invention to go into public use without objection. But it should be clearly established by proof, that such public use was with the knowledge and consent of the inventor. The mere user by the inventor of his invention in trying experiments, or by his neighbors with his consent, as an act of kindness for temporary and occasional purposes only, will not destroy his right to a patent therefor. *Wyeth v. Stone*, 1 Story, 278.

403. If the patentee, after obtaining his patent, dedicates or surrenders it to

public use, or acquiesces for a long period in the public use thereof, without objection, he is not entitled to the aid of a court of equity to protect his patent; and such acquiescence may amount to complete proof of a dedication or surrender thereof to the public. *Ibid.*

404. But to entitle the defendants to the benefit of such a defence, the facts must be explicitly relied on and put in issue by their answer; otherwise the court cannot notice it. *Ibid.*

405. To entitle a person to claim the benefit of the 7th section of the Patent act of 1839, ch. 88, he must be a person who is a purchaser, or who has used the patented invention before the patent was issued, by a license or grant, or by the consent of the inventor, and not be a purchaser under a mere wrongdoer. *Pearson v. The Eagle Screw Co.*, 3 Story, 402.

406. The case of *McChurg v. Kingsland*, (1 How. Sup. Ct. R. 202,) commented on and explained. *Ibid.*

407. It has not, and indeed it cannot, be denied, that an inventor may abandon his invention, and surrender or dedicate it to the public. This inchoate right, thus gone, cannot afterwards be resumed at his pleasure; for when gifts are once made to the public in this way, they become absolute. The question which generally arises on trials is a question of fact, rather than of law; whether the acts or acquiescence of the party furnish, in the given case, satisfactory proof of an abandonment, or dedication of the invention to the public. *Pennock et al. v. Dialogue*, 2 Peters', 16.

408. If an inventor should be permitted to hold back from the knowledge of the public the secrets of his invention; if he should, for a long period of years, retain the monopoly, and make and sell his invention publicly, and thus gather the whole profits of it, relying upon his superior skill and knowledge of the structure; and then, and then only, when the danger of competition should force him to procure the exclusive right, he should be allowed to take out a patent, and thus exclude the public from any further use than what should be derived under it during his fourteen years, it would materially retard the progress of science and the useful arts, and give a premium to those who should be least prompt to communicate their discoveries. *Ibid.*, 19.

409. If an invention is used by the public, with the consent of the inventor, at the time of his application for a patent, how can the court say that his case is nevertheless such as the act was intended to protect? If such a public use is not a use within the meaning of the statute; how can the court extract the case from its operation, and support a patent, when the suggestions of the patentee were not true; and the conditions, on which alone the grant was authorized, do not exist? *Ibid.*, 21.

410. The true construction of the Patent law is, that the first inventor cannot acquire a good title to a patent, if he suffers the thing invented to go into public use, or to be publicly sold for use, before he makes application for a patent. This voluntary act or acquiescence in the public sale or use, is an abandonment of his right; or, rather, creates a disability to comply with the terms and conditions of the law, on which alone the Secretary of State is authorized to grant him a patent. *Ibid.*, 23.

411. What use by the public, before the application is made for a patent, shall make void the right of a patentee. *Shaw v. Cooper*, 7 Peters', 202.

412. From an examination of the various provisions of the acts of Congress relative to patents for useful inventions, it clearly appears, that it was the intention of the legislature, by a compliance with the requisites of the law, to vest the exclusive right in the inventor only; and that, on condition that his invention was neither known nor used by the public before his application for a patent. If such use or knowledge shall be proved to have existed prior to

the application for the patent, the act of 1793 declares the patent void; and the right of an alien is vacated in the same manner, by proving a foreign use or knowledge of his invention. That knowledge or use which would be fatal to the patent right of a citizen, would be equally so to the right of an alien. *Ibid.*

413. The knowledge or use spoken of in the act of Congress of 1793, could have referred to the public only; for the provision would be nugatory if it were applied to the inventor himself. He must necessarily have a perfect knowledge of the thing invented, and of its use, before he can describe it, as by law he is required to do preparatory to the emanation of a patent. *Ibid.*

414. There may be cases in which a knowledge of the invention may be surreptitiously obtained and communicated to the public, that do not affect the right of the inventor. Under such circumstances, no presumption can arise in favor of an abandonment of the right to the public by the inventor: though an acquiescence on his part will lay the foundation for such a presumption. It is undoubtedly just that every discoverer should realize the benefits resulting from his discovery, for the period contemplated by law. But those can only be reserved by a substantial compliance with every legal requisite. This exclusive right does not rest alone on his discovery, but also upon the legal sanctions which have been given to it, and the forms of law with which it has been clothed. *Ibid.*

415. No matter by what means an invention may have been communicated to the public before a patent is obtained, any acquiescence in the public use by the inventor will be an abandonment of the right. If the right were asserted by him who fraudulently obtained it, perhaps no lapse of time could give it validity. But the public stand in an entirely different relation to the inventor. His right would be secured by giving public notice that he was the inventor of the thing used, and that he should apply for a patent. *Ibid.*

416. The acquiescence of an inventor in the public use of his invention, can in no case be presumed where he has no knowledge of such use. But this may be presumed from the circumstances of the case. This will in general be a fact for a jury: and if the inventor do not, immediately after this notice, assert his right, it is such evidence of acquiescence in the public use, as for ever afterwards to prevent him from asserting it. After his right shall be perfected by a patent, no presumption arises against it from a subsequent use by the public. *Ibid.*

417. A strict construction of the act of Congress, as it regards the public use of an invention before it is patented, is not only required by its letter and spirit, but also by sound policy. *Ibid.*

418. The question of abandonment to the public does not depend on the intention of the inventor. Whatever may be the intention, if he suffers his invention to go into public use, through any means whatsoever, without an immediate assertion of his right, he is not entitled to a patent; nor will a patent obtained under such circumstances protect his right. *Ibid.*

419. The public use or sale of an invention, in order to deprive the inventor of his right to a patent, must be a public use or sale by others, with his knowledge and consent, and before his application therefor. A sale or use of it, with such knowledge or consent, in the intermediate time between the application for a patent and a grant thereof, has no such effect. *Ryan v. Goodwin*, 3 Sumner, 514.

420. If a person employed in the manufactory of another, whilst receiving wages, makes experiments at the expense and in the manufactory of his employer; has his wages increased in consequence of the useful result of the experiments; makes the article invented, and permits his employer to use it, no compensation for its use being paid or demanded; and then obtains a patent;

these facts will justify a presumption of a license to use the invention. *M'Clurg and others v. Kingsland and others*, 1 Howard, 202.

421. Such an unmolested and notorious use of the invention prior to the application for a patent, will bring the case within the provisions of the 7th section of the act of 1836, c. 88. *Ibid*.

422. The assignees of a patent right take it subject to the legal consequences of the previous acts of the patentee.

423. The patentee need not prove that he has hawked his patented article about for a market, and that he has tried to sell it to any person. Those seeking to defeat the patent must prove that the patentee neglected or refused to sell for reasonable prices, when application was made to him. *By Judges Nelson and Betts, in Benjamin et al. v. Lowlen et als.*, U. S. C. C. Southern District of New York, April term, 1846.

424. The first inventor cannot acquire a good title to a patent if he suffer the thing invented to go into public use, or to be publicly sold for use, before he makes application for a patent. *Earle v. Page*, 6 N. Hamp. 477.

X. Of assignments of letters patent and patent rights.

425. A patentee of friction matches, by a deed under seal, undertook as follows: "To grant, bargain, sell, convey, assign, and transfer to B, his executors, administrators, and assigns, the right and privilege, hereinafter mentioned, of making, using, and selling the friction matches," patented, and to have and to hold "the right and privilege of manufacturing the said matches, and to employ in and about the same six persons, and no more, and to vend the said matches in any part of the United States." *It was held*, that this was a license or authority from the patentee, and need not be recorded in the Patent Office, under the Patent act of 1836, ch. 357, sec. 11. *Brooks v. Byam*, 2 Story, 525.

426. A license need not be recorded in the Patent Office, unless there be some positive provision of the Patent act, which renders it an indispensable prerequisite to its validity. *Ibid*.

427. The recording within three months, according to the statute, is merely directory; and any subsequent recording of an assignment will be sufficient to pass the title to the assignee, except as to intermediate *bona fide* purchasers, without notice. *Ibid*.

428. The Patent act of 1826, ch. 357, sec. 11, provides for the recording of three kinds of assignments, and of no others: first, an assignment of the whole patent; secondly, an assignment of any undivided part thereof; and, thirdly, a grant or conveyance of the exclusive right under the patent within any specified part of the United States. *Ibid*.

429. *It was held*, that the right granted by the above deed was a license or authority, coupled with an interest in the execution, to the grantee and six persons to be employed by him in making matches; that the right was an entirety, incapable of being apportioned or divided among different persons; that, therefore, an assignment by B, of a right to make as many matches as one person could roll up, was void. *Ibid*.

430. *Quare*, if the license is not such a personal privilege, that the entirety cannot be assigned, notwithstanding it was given to B; and his assigns. *Ibid*.

431. The act of 1836, ch. 357, sec. 11, relating to the recording of assignments of patents, is merely directory, for the protection of *bona fide* purchasers without notice, and does not require the recording of an assignment within three months, as a prerequisite to its validity. *Pitts v. Whitman*, 2 Story, 609.

432. A contract may be made to convey a future invention, as well as a past one, and for any improvement or maturing of a past one. *Nesmith v. Calvert*, 1 Woodbury, 84.

433. Under the act of 1836, the patentee may assign any part of his right. *Boyd v. M^r Alpen*, 3 McLean, 427.

434. The assignment must be recorded. *Ibid.*

435. If not recorded, a subsequent assignee, without notice, would hold. *Ibid.*

436. A vendor of a patent right, in the bill of sale, described the machine thus: "One machine for cutting, making, and manufacturing combs, like the machines which I use and improve, and such as I have a patent right for." It was held, that this latter clause did not amount to a covenant on the part of the vendor that he had a valid patent right. *Bull v. Pratt*, 1 Conn. 342.

CLASS No. I.

AGRICULTURE,

INCLUDING

INSTRUMENTS AND OPERATIONS.

LIST OF PATENTS.

CLASS I.—AGRICULTURE, including Instruments and Operations.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Agriculture, improvement	Peter Pardee	Trenton, N. Y.	Feb. 6, 1829
Apples, gathering	Samuel Laning	Camden, N. J.	Nov. 1, 1830
Apples, gathering and cleansing ..	Elias Ellis	Duxbury, Vt.	Dec. 6, 1831
Bee-hive	John Sweet	Bethlehem, Mass. ...	Apr. 11, 1810
Bee-hive	Timothy Stanley	Farmington, Conn. ...	Dec. 9, 1811
Bee-hive	Timothy Stanley	Farmington, Conn. ...	Jan. 6, 1812
Bee-hive	Edward Blake	Hartford, Maine	Nov. 6, 1820
Bee-hive	Simon C. Williams	Shenandoah co., Va. ...	May 14, 1823
Bee-hive	William J. Stillwell	Root, N. Y.	Mar. 18, 1824
Bee-hive	Cuthbert Wiggins	Fayette county, Pa. ...	Feb. 27, 1827
Bee-hive	Samuel Morrill	Dixfield, Maine	Feb. 4, 1834
Bee-hive	Abial Whitman, jr.	Londonberry, Vt.	Nov. 6, 1834
Bee-hive	Samuel Morrill	Dixfield, Maine	Jan. 16, 1835
Bee-hive	Orlando Mack	Gilsum, N. H.	Apr. 22, 1835
Bee-hive	J. M. Hubbard	Canterbury N. H.	Feb. 5, 1836
Bee-hive	Ebenezer Beard	New Sharon, Maine ...	Feb. 25, 1836
Bee-hive	Sturgess M. Judd	Danbury, Conn.	Mar. 30, 1836
Bee-hive	John M. Weeks	Salisbury, Vt.	June 30, 1836
Bee-hives	Samuel C. Myers	Mount Pleasant, Pa. ...	July 22, 1839
Bee-hives	John Sholl	New York	Nov. 29, 1839
Bee-hives*	William M. Hall	Wallington, Ct.	Dec. 27, 1839
Bee-hives	Martin Engel	Easton, Pa.	Apr. 15, 1840
Bee-hives	Robert Martin	Fairfield, Ohio	May 19, 1840
Bee-hives	Constant Webb	Wallington, Ct.	May 4, 1841
Bee-hives	James Le Patourel	Chandlerville, Ohio ...	June 11, 1841
Bee-hives	John M. Weeks	Salisbury, Vt.	July 1, 1841
Bee-hives	Hiram A. Pitts	Winthrop, Maine	Sep. 25, 1841
Bee-hives	Shadrach Trumbull	Suffield, Conn.	Apr. 6, 1842
Bee-hives	John Milholland and Ben. Crane	Chandlerville, O.	Apr. 29, 1842
Bee-hives	Fred. Wolfersberger	Plymouth, O.	May 12, 1842
Bee-hives	James Jones	Galway, N. Y.	May 12, 1842
Bee-hives	Daniel H. Farnam	Litchfield, Conn. ...	May 20, 1842
Bee-hives	Elijah Grumman	Norwalk, Conn.	May 26, 1842
Bee-hives	Henry Hiser	Wooster, Ohio	June 27, 1842
Bee-hives	James E. Ross	Mount Sidney, Va.	July 8, 1842
Bee-hives	Jesse W. Davidson	Rome, Ohio	Sep. 17, 1842
Bee-hives	Zachariah R. Hench	Port Royal, Pa.	Oct. 12, 1842
Bee-hives	Edwin Booth	Springfield, Mass. ...	Nov. 28, 1842
Bee-hives	A. Francis & J. Carlyle	Chandlerville, O.	Nov. 28, 1842
Bee-hives	William Bryant	Nashville, Tenn.	Dec. 21, 1842
Bee-hives	Wesley McCoy, as- signee of J. Harris	Clairsville, O.	Jan. 27, 1843
Bee-hives	Moreland and Howell	Zanesville, Ohio.	Feb. 16, 1843
Bee-hives	George Gebhart	Dayton, O.	Feb. 20, 1843
Bee-hives	George Dofler	Frederick, Md.	Mar. 4, 1843
Bee-hives	Joseph C. Rich	Penfield, N. Y.	Mar. 4, 1843
Bee-hives	Edmund Pepple	Canton, O.	June 24, 1843
Bee-hives	William D. Miller	Mad River, O.	Sep. 1, 1843
Bee-hives	Joseph Miller	Lexington, O.	Nov. 6, 1843
Bee-hives	Aaron E. James	Point Pleasant, Va. ...	Jan. 6, 1844
Bee-hives	Sam. & J. D. Cope	Damascusville, O.	Feb. 12, 1844

* Additional improvement, March 29, 1841.

† Ante dated March 12, 1841.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Bee-hives	George B. West	Fairfield, O.	Apr. 20, 1844
Bee-hives	James A. Cutting	Haverhill, N. H.	June 24, 1844
Bee-hives	Jacob D. Fulkerson	Unity, Ohio.	July 1, 1844
Bee-hives	Oliver Reynolds	Webster, N. Y.	Dec. 4, 1844
Bee-hives	Elias Jones	Amsterdam, N. Y.	Feb. 12, 1845
Bee-hives	Silas Hart	New Haven, N. Y.	Mar. 26, 1845
Bee-hives	Abraham Sanburn	Carthage, O.	Mar. 26, 1845
Bee-hives	Clark Wheeler	Little Valley, N. Y.	June 20, 1845
Bee-hives	Israel Lamborn	Marshallton, Pa.	Aug. 26, 1845
Bee-hives	Christopher Suydam	Lambertsville, N. J.	Nov. 18, 1845
Bee-hives	James Robb	Lewiston, Pa.	Dec. 31, 1845
Bee-hives	Aaron Colton	Pittsfield, Vt.	Dec. 31, 1845
Bee-hive	Harvey W. Sabine	Gorham, N. Y.	Jan. 15, 1846
Bee-hives	William R. Kelsey	Big Steam P'int, N.Y.	May 9, 1846
Bee-hive	William Whitcomb	Grafton, Vt.	Sept. 19, 1846
Bee-hive and bee-houses	John Searle	Hill, N. H.	Jan. 20, 1838
Bee-hives, cloth moth harbor for	Daniel Arndt	W ^t Middletown, Pa.	May 9, 1846
Bee-hives, entrance to	George Upham	Hebron, O.	May 1, 1845
Bee-hive and management of bees	Philip Munch	Putnam, O.	July 27, 1831
Bee-hive and management of bees	Abijah Alley	Cincinnati, O.	Aug. 26, 1831
Bee-hive and management of bees	Eben Britton	Little Falls, N. Y.	Sept. 9, 1831
Bee-hive and management of bees	Levi H. Parish	Briton, N. Y.	Aug. 6, 1834
Bee-hive slide	Ebenezer Beard	Charlestown, Mass.	Mar. 12, 1830
Bee-house	William Groves	Harrisburgh, Pa.	June 12, 1835
Bee-house	Abraham Decker	Walnut township, O.	July 30, 1845
Bees, management of	Francis Kelsey	Lockport, N. Y.	Aug. 26, 1828
Bees, managing	Elias Parks	Wheatfield, N. Y.	July 22, 1845
Bee moths, &c., improved lantern for the destruction of	Samuel C. Wilt	Hardeton, Pa.	Oct. 7, 1846
Bee palaces	Lemon Hamlin	Kirkersville, O.	July 13, 1844
Bee protectors	Thomas D. Howell	Zanesville, O.	Dec. 15, 1843
Binding grain, machines for	Israel Keyes	Putney, Vt.	July 17, 1839
Bog and bush cutting	Thomas Spring	Granby, Conn.	Apr. 27, 1833
Bogging machine	Squire Collins	Hillsdale, N. Y.	Feb. 22, 1827
Broom corn, scraping	Billy J. Billings & J. S. Billings	Gorham, N. Y.	Oct. 15, 1831
Buckwheat, machine for cleaning	Dan. Pease, jr.	Floyd, N. Y.	July 14, 1846
Buds, delaying from blossoming	Robert Moore	Rowan county, N.C.	Mar. 16, 1832
Butter, making	B. G. Burtis & G. Burtis	New York	Feb. 27, 1807
Butter, making	Isaac Shepherd	Meredith, N. Y.	May 28, 1818
Butter, making from lard	Zina Phinney	Green county, N.Y.	Mar. 4, 1814
Butter, manufacturing	Asahel Curus	Paris, N. Y.	Apr. 20, 1830
Butter, working and cutting curds	William Buck	Chatham, Conn.	Dec. 5, 1825
Butter working and pressing*	Titus D. Gail	Eden, N. Y.	Oct. 10, 1840
Butter-working, machines for	Seth Bishop	Redding, Ct.	Jan. 8, 1842
Butter-working, machines for	E. Wilson & M. Lee	Redding, Ct.	Feb. 7, 1842
Cane cutters	John P. Bryan	Princeton, Ky.	July 8, 1843
Canker worm—see Trees.			
Cheese, curd cutter	Isaac Hunter, jr.	New Braintree, Mass.	Dec. 23, 1834
Cheese, curd cutter	Anson Morris	Sackett's Harb., N.Y.	May 2, 1829
Cheese, net	Lewis M. Norton	Litchfield, Conn.	June 4, 1827
Cheese, netting for forming pine apple	William Starr	Norway, N. Y.	Dec. 27, 1831
Cheese, turning and curing	Henry Webber	East Richfield, N.Y.	Apr. 22, 1835
Cheese, vat for forming pine apple	Lewis M. Norton	Troy, Pa.	Apr. 17, 1810
Churn	Isaac Baker	Massachusetts	Feb. 20, 1802
Churn	Joel Pierce	New York	Apr. 10, 1802
Churn	Abner Wing	Washington, N. Y.	May 26, 1806
Churn	Reuben Buck	Baltimore, Md.	June 23, 1807
Churn	Buel Cutter	Washington, N. Y.	Oct. 3, 1807
Churn	John Scripture	Alford, Mass.	Dec. 15, 1807
Churn	Simcon Hays	Poultney, N. Y.	Mar. 8, 1808
Churn	Stephen Stackhouse	Cazenovia, N. Y.	Mar. 11, 1808
Churn	Wm. W. Townsend	Sandy Hill, N. Y.	Mar. 22, 1808

* Additional improvement, July 20, 1841.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Churn.....	Daniel Pierpont.....	New Haven, Ct....	Apr. 22, 1806
Churn.....	Aaron Reed.....	Columbia co., N. Y.	Apr. 25, 1806
Churn.....	Nehemiah Howe.....	Windham, Ct....	Apr. 25, 1806
Churn.....	Simoon B. Willard....	Bloomfield, N. Y....	May 18, 1806
Churn.....	Dyer Cleaveland.....	Sheffield, Mass....	July 7, 1806
Churn.....	Dyer Cleaveland.....	Sheffield, Mass....	July 11, 1806
Churn.....	Erastus Townsend....	Canaan, N. Y....	July 12, 1806
Churn.....	John Bolton.....	Philadelphia, Pa....	Aug. 2, 1806
Churn.....	Samuel Moon, jr.....	Downington, Pa....	Oct. 24, 1806
Churn.....	Luther Jones.....	Canton, Ct....	Dec. 10, 1806
Churn.....	Ira Millington.....	Warren, N. Y....	Mar. 2, 1809
Churn.....	Ezra G. Jones.....	Otsego, N. Y....	April 21, 1809
Churn.....	Hez. Dickerman.....	Gt. Barrington, Mass	May 9, 1809
Churn.....	George Votce.....	Berlin, Ct....	May 10, 1809
Churn.....	John McCord.....	Washington, N. Y....	June 13, 1809
Churn.....	Luther Thompson.....	Sturbridge, Mass....	June 24, 1809
Churn.....	Thomas Nicholson.....	Nelson co., Ky....	Aug. 10, 1809
Churn.....	Benjamin U. Lapish....	Durham, N. H....	Aug. 15, 1809
Churn.....	Nathaniel Harrington..	Whitestown, N. Y....	Oct. 11, 1809
Churn.....	Benjamin Atwell and Israel Nichols.....	Otsego co., N. Y....	Oct. 14, 1809
Churn.....	Enoch Burt.....	Princeton, N. J....	Nov. 20, 1809
Churn.....	John Wetmore.....	Litchfield, Ct....	Dec. 8, 1809
Churn.....	David Osborne.....	Berkshire co., Mass.	Jan. 8, 1810
Churn.....	Benjamin Fairbanks..	Worcester, Mass....	Mar. 5, 1810
Churn.....	Aaron Smith.....	Tyngsborough, Mass	April 11, 1810
Churn.....	Ephraim Bacon.....	Hancock co., Mass.	July 26, 1810
Churn.....	Simoon Gray.....	Genesee, N. Y....	Aug. 17, 1810
Churn.....	Jos. Beach.....	Northfield, Mass....	Jan. 24, 1811
Churn.....	Lewis Cleveland.....	Holliston, Mass....	Feb. 7, 1811
Churn.....	Harry Mumford.....	Ulster co., N. Y....	Mar. 28, 1811
Churn.....	Daniel Robinson.....	Franklin, N. Y....	May 3, 1811
Churn.....	Jos. H. Shepard.....	Canaan, Mass....	Oct. 1, 1811
Churn.....	Adam Sheble.....	Philadelphia, Pa....	Nov. 27, 1811
Churn.....	William Pumphrey.....	Ohio.....	Jan. 5, 1814
Churn.....	Joshua Lane.....	Homer, N. Y....	May 15, 1815
Churn.....	Alvan Cornell and Hi- ram K. Cornell.....	Cambridge, N. Y....	Jan. 15, 1816
Churn.....	John Ewing.....	Boston, Mass....	April 30, 1816
Churn.....	Artemas Bills.....	Baltimore, Md....	July 29, 1816
Churn.....	Benjamin Webb.....	Tolland, Ct....	Aug. 22, 1816
Churn.....	Abel Broadway.....	Monson, Mass....	Nov. 25, 1816
Churn.....	Nathan Porter.....	Suffield, Ct....	April 7, 1818
Churn.....	Thomas T. Storm.....	New York.....	May 28, 1818
Churn.....	Jos. Lloyd.....	Orange co., N. Y....	Mar. 2, 1819
Churn.....	William L. Frazer.....	Oxford, N. Y....	Mar. 19, 1819
Churn.....	John Hale.....	Hillsborough, N. H.	Dec. 15, 1819
Churn.....	Adam Swart.....	Saratoga, N. Y....	April 9, 1821
Churn.....	Benjamin Hayden, jr.	Trenton, N. J....	June 15, 1822
Churn.....	E. Brown & A. Keith.	Winfield, N. Y....	June 19, 1822
Churn.....	Samuel Clarke.....	Morris co., N. Y....	Oct. 4, 1822
Churn.....	Abiram Baird.....	Schoharie co., N. Y.	Mar. 25, 1825
Churn.....	John P. Bortle.....	Claverack, N. Y....	April 19, 1825
Churn.....	Asa Humphrey.....	Gray, Me....	May 9, 1825
Churn.....	Samuel L. Bagley.....	Hillsdale, N. Y....	Mar. 24, 1827
Churn.....	Levi Rosencrans.....	Urbana, N. Y....	May 19, 1827
Churn.....	Nathan Whitney.....	Augusta, Me....	June 7, 1827
Churn.....	Daniel Sheldon.....	Poultney, N. Y....	Sept. 3, 1827
Churn.....	Samuel H. Baker.....	Wells township, Pa.	Jan. 10, 1828
Churn.....	Edward Spain.....	Mount Holley, N.J.	April 23, 1828
Churn.....	Joseph Hathaway.....	Canandaigua, N. Y.	Aug. 23, 1828
Churn.....	Zuri S. Doty.....	Groton, N. Y....	Mar. 17, 1829
Churn.....	Cotton Foss.....	Perry, Ohio.....	June 11, 1829
Churn.....	Abner Murray.....	Athens, N. Y....	June 27, 1829

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Churn.....	T. & L. Morrison....	Groton, N. Y.....	Oct. 16, 1829
Churn.....	James C. Barret.....	Collins, N. Y.....	Oct. 19, 1829
Churn.....	Horace Saxton.....	Paris, N. Y.....	Nov. 6, 1829
Churn.....	John Ewing.....	Worcester, Mass...	Jan. 29, 1830
Churn.....	Henry Shively and R. S. McEwen.....	Fredericksburgh, O.	Mar. 6, 1830
Churn.....	John Oothoudt.....	Lebanon, N. Y.....	Mar. 10, 1830
Churn.....	John Sowle and P. Brewer.....	Blenheim, N. Y....	Mar. 22, 1830
Churn.....	Isaac F. Waring.....	Columbia towns'p, O.	April 10, 1830
Churn.....	Iram Brewster.....	Blenheim, N. Y....	May 28, 1830
Churn.....	Moses Granger.....	Syracuse, N. Y....	July 14, 1830
Churn.....	Sereno Dickerman & Samuel M. Parsons.	Meriden, Ct.....	Oct. 1, 1830
Churn.....	Philip Cornell.....	Brutus, N. Y.....	Oct. 1, 1830
Churn.....	Nathan'l C. Tiffany & Ebenezer Robinson..	Caroline, N. Y.....	Dec. 14, 1830
Churn.....	Samuel Bushnell, 2d..	Saybrook, Ct.....	Dec. 20, 1830
Churn.....	David Smith.....	Emmetsburg, Md...	April 21, 1831
Churn.....	Joseph Crail.....	Warren, Ohio.....	May 5, 1831
Churn.....	Cyrus Baker.....	Charleston, N. Y...	June 13, 1831
Churn.....	Samuel Sweet, jr.....	Readfield, Mass...	June 13, 1831
Churn.....	Johnson Mewhinney..	Liberty township, O.	July 30, 1831
Churn.....	Zuri S. Doty.....	Massillon, Ohio...	Aug. 31, 1831
Churn.....	James Van Ankin, 2d..	Knox, N. Y.....	Sept. 26, 1831
Churn.....	Amon Bailey.....	Poultney, Vt.....	Oct. 6, 1831
Churn.....	John H. Bruner.....	McKean, Ohio.....	Feb. 9, 1832
Churn.....	Jedediah Darrow.....	Warren, Ohio.....	June 2, 1832
Churn.....	William Loomis.....	Ashford, Ct.....	June 7, 1832
Churn.....	Jesse Ladd.....	Holderness, N. H...	June 22, 1832
Churn.....	Simeon Power.....	Lawrenceville, Pa..	June 23, 1832
Churn.....	Isaac Van Gorder....	Warren, Ohio.....	June 27, 1832
Churn.....	James Bennett.....	Brutus, N. Y.....	July 25, 1832
Churn.....	Caleb C. Knowles....	Fayette, Me.....	Aug. 2, 1832
Churn.....	Anthony C. Carrell...	Granville, Ohio...	Oct. 25, 1832
Churn.....	Joseph Rickey.....	Centre township, O.	Oct. 25, 1832
Churn.....	Eli Willemin.....	Salem township, O..	Oct. 25, 1832
Churn.....	Webber Ferbish.....	Hallowell, Me.....	Mar. 6, 1833
Churn.....	Thomas Thorne.....	Clinton, N. Y.....	April 12, 1833
Churn.....	Warren Estabrook...	Salem, Ohio.....	Nov. 19, 1833
Churn.....	Uri L. Clark.....	Manor township, Pa.	Dec. 31, 1833
Churn.....	Iram Brewster.....	Blenheim, N. Y....	Dec. 31, 1833
Churn.....	James Gustine.....	New Petersburg, O.	May 14, 1834
Churn.....	John Brown.....	Hallowell, Me.....	June 18, 1834
Churn.....	Joshua Ricker.....	Bangor, Me.....	Aug. 9, 1834
Churn.....	Adna L. Norcross....	Hallowell, Me.....	Sept. 19, 1834
Churn.....	Iram Brewster.....	Schoharie co., N. Y.	Jan. 7, 1835
Churn.....	Francis Colton.....	New York.....	Jan. 9, 1835
Churn.....	Benjamin Randall....	North Pownall, Me.	Mar. 11, 1835
Churn.....	Samuel Clark.....	Parkman, Me.....	April 22, 1835
Churn.....	Philip S. Lowell....	Farmington, Me...	May 29, 1835
Churn.....	Michael Knight.....	Pownal, Mo.....	May 9, 1835
Churn.....	Isaac Wood.....	Fayette co., Ind...	June 26, 1835
Churn.....	Oliver Wyman.....	Dedham, Mass....	July 17, 1835
Churn.....	Hiram Phelps.....	Williston, Vt.....	July 21, 1835
Churn.....	William A. Herrick..	Green, Me.....	July 21, 1835
Churn.....	Russel Bradley.....	Williston, Vt.....	July 21, 1835
Churn.....	Joseph Turner.....	Poland, Me.....	Aug. 15, 1835
Churn.....	Caleb Angevine.....	New York.....	Aug. 17, 1835
Churn.....	Clifton C. Stearnes..	Buckport, Me.....	Aug. 17, 1835
Churn.....	Hezekiah Roberts....	Seneca Falls, N. Y.	Feb. 5, 1836
Churn.....	Lyman Whittier.....	Vienna.....	Feb. 10, 1836
Churn.....	John E. Thomas.....	Winchester, Ohio...	Feb. 12, 1836
Churn.....	Amos Hanson.....	Windham, Me.....	Mar. 2, 1836

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Churn.....	Thomas Nicholson...	Newmarket, Va....	Mar. 31, 1839
Churn.....	Charles Merriman...	Middletown, Ct....	April 21, 1839
Churn.....	Amasa Wharf.....	New Gloucester, Me.	June 16, 1839
Churn.....	Samuel Tyler.....	New Gloucester, Me.	June 25, 1839
Churn.....	Davis Variel.....	Minot, Me.....	July 1, 1839
Churn.....	Step'n P. W. Douglass	Lansingburg, N. Y..	Jan. 9, 1839
Churn.....	Joshua G. Pike.....	Lisbon, N. Y.....	April 28, 1839
Churn.....	Rufus Porter.....	Billerica, Mass.....	May 10, 1839
Churn.....	Enoch Thomas.....	Harrisonburg, Va....	May 30, 1839
Churn.....	Daniel Osgood, jr....	Blue Hill, Me.....	July 9, 1839
Churn.....	Milo B. Hough.....	Dover, Ohio.....	Jan. 21, 1839
Churn.....	John S. Thomson.....	Wyalusing, Pa.....	July 27, 1839
Churn.....	Constant Webb.....	Wallingford, Ct....	Nov. 26, 1840
Churn.....	A. & W. A. Crowell...	Salisbury, Ct.....	June 20, 1840
Churn.....	Thomas Pierce.....	Hartwick, N. Y....	Nov. 10, 1841
Churn.....	Lemuel Adams.....	Redding, Ct.....	April 16, 1842
Churn.....	Roderick Goodwin....	North Bergen, N. Y.	May 4, 1842
Churn.....	Noah H. Lindley.....	Redding, Ct.....	Aug. 25, 1842
Churn.....	Daniel F. Hiitt.....	Galena, Ill.....	Oct. 7, 1842
Churns.....	N. H. Lindley & W. Perry	Bridgeport, Ct.....	Mar. 10, 1843
Churn.....	George W. Cook.....	St. Louis, Mo.....	Feb. 28, 1844
Churn.....	Harness Bentley.....	Ballston, N. Y....	April 20, 1844
Churn.....	Jason B. Schermerhorn	New York.....	June 5, 1844
Churn.....	Thomas Ling.....	Portland, Me.....	Aug. 21, 1844
Churn.....	Samuel B. Howd.....	Arcadia, N. Y.....	Dec. 12, 1846
Churn.....	Charles King.....	Scipio, N. Y.....	April 4, 1846
Churn, balanced lever.....	Caleb Angevine.....	New York.....	April 19, 1832
Churn, box.....	T. & L. Morrison....	Groton, N. Y.....	Oct. 16, 1829
Churn, churning cream by atmospheric air.....	Elias V. Coe.....	Warwick, N. Y....	April 7, 1831
Churn, cradle.....	John Barber.....	Caroline, N. Y....	Jan. 28, 1830
Churn, cutting floats of.....	Reading Ryerson.....	Jay, Me.....	July 17, 1835
Churn, dash.....	Samuel Jackson.....	Jay, Me.....	June 11, 1836
Churn dashers.....	Peter Van Antwerp...	Coeymans, N. Y....	Feb. 16, 1843
Churn, double dasher.....	Enos Mitchell.....	Pittston, Me.....	May 22, 1841
Churn, double dash.....	Ezra Waterhouse.....	Gardiner, Me.....	Sept. 29, 1825
Churn, double dash.....	William Sutton.....	Geneva, N. Y.....	Oct. 1, 1830
Churn, double revolving.....	Luther Barney & Abel A. Beach	Groton, N. Y.....	Feb. 5, 1830
Churn, floating wheel.....	Ebenezer Dewey.....	Butternuts, N. Y....	Oct. 1, 1830
Churn, forcing valve piston.....	Benjamin Cushwa....	Clearspring, Md....	Jan. 24, 1829
Churn, horizontal.....	John Davidson.....	Cheshire, N. H....	April 3, 1812
Churn, horizontal vibrating.....	Thomas Pratt.....	Cheshire, N. H....	Sept. 12, 1811
Churn, inclined wheel, applied with dogs.....	G. F. Reeve and J. Ketcham	Orange co., N. Y....	Aug. 10, 1821
Churn, labor saving.....	William Cook.....	Southport, N. Y....	Dec. 7, 1829
Churn, labor saving.....	Samuel J. O'Brien....	New York.....	Dec. 22, 1829
Churn, labor saving.....	Abner Bristol.....	Hillsdale, N. Y....	April 28, 1830
Churn, lever.....	Philip H. Kemtall....	Salem, Mass.....	June 13, 1831
Churn, lever power.....	Hosea H. Grover.....	Auburn, N. Y.....	Nov. 30, 1829
Churn, machine for working.....	Philo. B. Pratt.....	Kent, Ct.....	July 22, 1833
Churn, pendulum.....	Cyrus Hitchcock.....	Vernon, N. Y.....	Aug. 7, 1813
Churn, pendulum.....	Caleb Angevine.....	New York.....	Feb. 28, 1831
Churn, propelling and cradles.....	Ezra Whitman, jr....	Winthrop, Me.....	Mar. 27, 1835
Churn, propelling by weights.....	Asahel Bacon.....	Windso, N. Y.....	Oct. 10, 1835
Churn, revolving.....	Nicholas King.....	Washington, D. C..	Mar. 10, 1808
Churn, revolving dasher.....	Hardin Branch.....	New York.....	April 18, 1832
Churn, rocking.....	W. Keeler & J. Waring	Connecticut.....	June 23, 1803
Churn, rocking.....	Daniel Parmelee.....	Dutchess co., N. Y.	Sept. 8, 1808
Churn, rocking.....	John G. Philip.....	Kinderhook, N. Y..	Feb. 15, 1827
Churn, spiral spring.....	Lewis Hinkson.....	Hallowell, Me.....	Jan. 7, 1835
Churn, tin.....	Thomas E. Warner....	Harford co., Md....	Feb. 11, 1834
Churn, top.....	Levi Stephens.....	Connecticut.....	May 8, 1804

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	DATE GRANTED.
Churn, and washing machine....	John Devotie.....	Vernon, N. Y.....	Dec. 5, 1889
Churn, and washing machine....	Daniel Read.....	Slaterville, N. Y.....	June 16, 1890
Churn, and washing machine....	Hes. Kingsbury.....	Hebron, Ct.....	July 26, 1890
Churn, and washing machine....	Ira Park.....	Delhi, N. Y.....	Jan. 16, 1895
Churn, and washing machine....	Charles Otis.....	Finksburg P.O., Md.....	June 15, 1895
Churn, and washing machine....	Thomas Ling.....	Winthrop, Me.....	Sept. 9, 1895
Churn, and washing machine.— Churn, and working it.	See Class 17. Talmage Ross.....	Pickaway, Ohio....	Jan. 26, 1831
Cider mills.—See Apples grinding.	Class 13.		
Clover seed, gathering.....	John Smith.....	Fredericksburg, Va..	April 28, 1815
Clover huller.....	James K. Mitchell...	Danville, Pa.....	July 20, 1843
Clover mill, for hulling, &c.*	Henry Hizer.....	Wooster, Ohio.....	June 14, 1845
Clover mill, for hulling, &c.....	Samuel W. Powell...	Turbet, Pa.....	Aug. 16, 1845
Cocoa grass, destroying.....	Henry B. Kenner...	New Orleans, La....	Oct. 6, 1843
Corn and cane cutters.....	Jacob Peck.....	Oakland, Pa.....	Aug. 28, 1844
Corn, covering.....	Thomas Williams...	Pittsylvania Va....	Dec. 19, 1822
Corn fodder, cutting and crushing.	Rudolph Miller.....	York, Pa.....	Oct. 3, 1844
Corn fodder, cutting and crushing.	Hiram A. Pitts.....	Winthrop, Maine....	May 1, 1845
Corn, hulling.....	Warren Carpenter...	Newcastle, Pa.....	Jan. 23, 1836
Corn, husking.....	Howlett Bushnell...	Norwich, Conn.....	Nov. 14, 1826
Corn, husking.....	Jonathan Cutler....	Putney, Vt.....	July 31, 1837
Corn, machine for shelling.....	Elijah Converse....	Cincinnati, Ohio....	Jan. 7, 1846
Corn, planting.—See Seeding.			
Corn rows, &c., laying off.....	Peter Moseley.....	Benton, Miss.....	Dec. 12, 1842
Corn sheller.....	Paul Pillsbury.....	Massachusetts.....	Oct. 25, 1803
Corn sheller.....	John Heavin.....	Fredericktown, Md..	May 8, 1810
Corn sheller.....	J. Fuller.....	Rockland, Va.....	Mar. 19, 1816
Corn sheller, (impr'ton Phinney's)	Hugh Gallagher.....	Pittsburgh, Pa.....	Oct. 29, 1818
Corn sheller.....	Walter James.....	Ashford, Conn.....	May 6, 1819
Corn sheller, (impr't on Jones's)	Rufus Guthrie.....	Brimfield, Mass.....	Jan. 18, 1820
Corn sheller.....	H. and E. J. Roosevelt	New York.....	Jan. 26, 1821
Corn sheller.....	Noah Lindsay.....	Catskill, N. Y.....	Mar. 28, 1821
Corn sheller.....	Samuel Spooner.....	Petersham, Mass....	Feb. 27, 1823
Corn sheller.....	William E. Sheffield.	New York.....	April 15, 1823
Corn sheller.....	Lemuel Peck.....	Brookfield, Conn....	April 9, 1824
Corn sheller.....	John Moon.....	Falls township, Pa..	April 30, 1824
Corn sheller.....	Chauncey Bulkley...	Manchester, Vt.....	May 25, 1824
Corn sheller.....	Hiram Hubbard.....	Palmyra, N. Y.....	June 17, 1824
Corn sheller.....	Lewis Whitney.....	New York.....	Nov. 13, 1824
Corn sheller.....	Benjamin Crooker...	New York.....	Dec. 2, 1824
Corn sheller.....	Alverson Little.....	Columbia, Conn.....	Dec. 23, 1824
Corn sheller.....	Pierson Reading.....	Trenton, N. J.....	Dec. 27, 1824
Corn sheller.....	Francis Price.....	New York.....	May 4, 1825
Corn sheller.....	William C. Hawley...	New York.....	June 22, 1825
Corn sheller.....	John Moon.....	Morrisville, Pa.....	June 27, 1825
Corn sheller.....	Samuel Lane.....	Hallowell, Maine....	Sept. 9, 1825
Corn sheller.....	Amon Bailey.....	Poultney, Vt.....	Nov. 1, 1825
Corn sheller.....	Christopher Hoxie...	Hudson, N. Y.....	Dec. 8, 1825
Corn sheller, (impr't on Pillsbury's)	Jeremiah Dodson....	Guilford, N. C.....	June 15, 1826
Corn sheller.....	Elijah Russell.....	Greensburg, N. C....	Oct. 24, 1826
Corn sheller.....	Thomas Newman...	Guilford, N. C.....	Feb. 7, 1827
Corn sheller.....	John Brown.....	Providence, R. I....	Mar. 18, 1828
Corn sheller †.....	William Hoyt.....	Vernon, Ind.....	April 29, 1828
Corn sheller.....	Phil. Grosjean.....	Louisville, Ky.....	July 29, 1828
Corn sheller.....	Thomas J. Dean.....	Virgin, N. Y.....	Dec. 8, 1828
Corn sheller.....	John S. Gardiner...	Canandaigua, N. Y..	June 11, 1829
Corn sheller.....	Samuel E. Donnell...	Greensboro' co., N. C.	April 5, 1833
Corn sheller.....	John Ross.....	Boundbrook, N. J....	April 12, 1833
Corn sheller.....	Michael Carpenter...	Lancaster, Pa.....	Aug. 8, 1833
Corn sheller.....	Frederick Elliott....	Greensboro' co., N. C.	Nov. 19, 1833
Corn sheller.....	Calvin Page.....	Sanborn, N. H.....	Mar. 13, 1834
Corn sheller.....	Rodney Hoyt.....	Miamisburg, Ohio....	Oct. 31, 1834
Corn sheller.....	Warren Johnson.....	Boscawen, N. H.....	Dec. 17, 1834

* Antedated May 4th, 1845.

† Reissued June 12, 1831.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEAT SOWN.
Corn sheller.....	J. H. Taylor and A. J. Cowles.....	Westfield, N. Y....	Feb. 11, 1835
Corn sheller.....	Eph. Rand and Adna L. Norcross.....	Hallowell, Maine....	Feb. 13, 1835
Corn sheller.....	Dunbar and Powers..	Portland, Maine....	June 26, 1835
Corn sheller.....	John P. Small.....	Gilmanton, N. H....	July 21, 1835
Corn sheller.....	Joseph Turner.....	Portland, Maine....	Aug. 15, 1835
Corn sheller.....	Elijah Morse.....	Knoxville, Tenn....	Sept. 9, 1835
Corn sheller.....	James S. Harris.....	Poultney, Vt.....	Sept. 18, 1835
Corn sheller.....	Warren Carpenter....	Newcastle, Pa.....	Jan. 23, 1836
Corn sheller.....	Albert W. Gray.....	Middletown, Vt....	Mar. 31, 1836
Corn sheller.....	Robert Gray.....	Northfield, N. Y....	Jan. 16, 1835
Corn sheller.....	Levi Stephens.....	New York.....	May 8, 1804
Corn sheller.....	George E. Waring....	Poundridge, N. Y....	Mar. 16, 1827
Corn sheller.....	Robert Humphreys..	Harpersfield, N. Y..	Dec. 24, 1824
Corn sheller.....	Zina Phinney.....	Cairo, N. Y.....	Feb. 16, 1815
Corn shelling.....	William Hoyt.....	Vernon, Ind.....	Dec. 17, 1830
Corn shelling.....	Jabez Parker and Hiram M. Smith.....	Richmond, Va.....	April 9, 1831
Corn shelling.....	Joel Barnes and Nelson T. Loomis....	Cornwall, Conn....	April 13, 1831
Corn shelling.....	David Hitchcock....	New York.....	June 13, 1831
Corn shelling.....	Jesse Reed.....	Marshfield, Mass....	Sept. 1, 1831
Corn shelling.....	William Geo.....	Prince George co., Va.	May 10, 1832
Corn shelling.....	Christian Thomas....	Lancaster, Pa.....	Sept. 3, 1832
Corn shelling.....	Michael Carpenter..	Lancaster, Pa.....	Oct. 25, 1832
Corn shelling.....	Daniel Hall.....	Strausburg P'nship, Pa.	Nov. 12, 1832
Corn shelling.....	Timothy Wellman, jr.	Brooklyn, Vt.....	Oct. 9, 1834
Corn shelling.....	Ezekiel W. Coffin....	Gilead, Maine.....	Dec. 23, 1834
Corn shelling.....	Isaac A. Hedges.....	Elmyra, N. Y.....	Feb. 3, 1836
Corn shelling.....	Henry G. Neal.....	Poultney, Vt.....	Feb. 10, 1836
Corn shelling.....	Ira Smith.....	Downington, Pa....	Feb. 13, 1836
Corn shelling.....	J. C. Baldwin.....	Staunton, Va.....	Oct. 11, 1836
Corn shelling.....	Thomas Wright.....	New Village, N. J..	June 12, 1838
Corn shelling.....	James W. Webb.....	Mount Morris, N. Y.	July 16, 1838
Corn shelling.....	Rufus Porter.....	Billerica, Mass....	Sept. 12, 1838
Corn shelling.....	Lester E. Dennison..	Saybrook, Conn....	Oct. 8, 1838
Corn shelling.....	Ezra Bond.....	Mendon, N. Y.....	June 13, 1831
Corn shelling.—See Threshing.			
Corn sheller.....	Olonzo R. Dinsmore..	West Chester, N. H.	Feb. 28, 1839
Corn sheller.....	W. McIlroy, jr., Bartley and Wm. Boon.	Greenwich, N. J....	Mar. 30, 1839
Corn sheller.....	William R. Parker....	Milton, Del.....	July 9, 1839
Corn sheller.....	Lester E. Dennison..	Saybrook, Conn....	Aug. 12, 1839
Corn sheller.....	Samuel H. Kisinger and E. G. W. Stake	Williamsport, Md..	Oct. 31, 1839
Corn sheller.....	Porter A. Gladwin....	Chester, Ct.....	April 24, 1840
Corn sheller.....	John A. Whitford....	Saratoga Spr'gs, N. Y.	Jan. 23, 1841
Corn sheller.....	Charles Willia.....	Chelsea, Mass.....	Jan. 27, 1841
Corn sheller.....	Nichol. Goldsborough	Eaton, Md.....	Feb. 12, 1841
Corn sheller.....	Pierson Reading.....	Batavia, Ohio.....	Sept. 25, 1841
Corn sheller.....	Joseph H. Derby.....	Leominster, Mass....	Nov. 10, 1841
Corn sheller.....	John Mercer.....	Harriaville, Ohio..	June 24, 1839
Corn shellers.....	Cyrus C. Baldwin....	Cincinnati, Ohio....	July 16, 1842
Corn shellers.....	Nathan Charles and Edwin A. Scolfield.	Norwich, Ct.....	Jan. 20, 1843
Corn shellers.....	Carlos G. Pressey and James B. Dudley...	Andover, N. H....	Mar. 30, 1843
Corn shellers.....	Francis N. Smith.....	Kinderhook, N. Y..	June 1, 1843
Corn shellers.....	William Manning....	South Trenton, N. J.	Aug. 4, 1843
Corn sheller.....	William McAll.....	Talladega, Ia.....	April 13, 1844
Corn sheller.....	Joseph D. Briggs....	Saratoga, N. Y.....	June 14, 1845
Corn sheller.....	Thomas D. Burrall...	Geneva, N. Y.....	Dec. 6, 1845
Corn sheller.....	Waldren Beach.....	Baltimore, Md.....	April 18, 1846

INVENTIONS OR DISCOVERIES:	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Corn abeller.....	David S. Hollister...	Baltimore, Md.....	June 13, 1846
Corn abeller.....	J. W. Gordon.....	Jamestown, N. C....	Oct. 7, 1846
Corn shelling and cleaning.....	Lorenzo B. Glover...	Easton, Conn.....	July 31, 1846
Corn shelling and cleaning.....	James Murray.....	Baltimore, Md.....	Oct. 7, 1846
Corn stalks, cutting.....	A. Glendenning.....	Bulter county, Pa....	Sept. 25, 1893
Cotton cleaner.....	Fones McCarty.....	Demopolis, Ala.....	Feb. 12, 1845
Cotton, cleaning.—See Class 3.			
Cotton, drying, &c.....	John Philbrick.....	Cold Spring, Miss...	Feb. 12, 1836
Cotton seed, separating.—See <i>Hulling</i> .			
Cotton plant, management of.....	Samuel W. Pomeroy...	Brighton, Mass.....	May 6, 1824
Cotton scraper.....	Horatio Starke.....	Wilkinson co., Miss...	Feb. 3, 1824
Cotton thinner.....	Gordon Gatling.....	Murfreesboro', N. C.	June 19, 1835
Cradle.—See <i>Cutting</i> .			
Cream, extracting from milk.....	Samuel Davis.....	New York.....	Oct. 1, 1830
Crushers, corn and cob.....	James L. McKnight...	Buchanan, Va.....	Dec. 15, 1843
Cultivating and tilling the ground.	Joseph T. Prescott...	Chesterfield, Maine...	May 15, 1834
Cultivating cotton, scraper and harrow.....	William P. Sample...	Bedford co., Tenn...	Sept. 3, 1831
Cultivator.....	James Hall.....		Nov. 19, 1814
Cultivator.....	S. Hubbard & J. Graves	Wilmington, Vt.....	June 21, 1823
Cultivator.....	Richard Herbert.....	Williamsport co. Tenn.	Aug. 19, 1828
Cultivator.....	David Davis.....	Fredericksburg, Va...	July 17, 1835
Cultivator.....	James M. Garnett....	Loretto, Va.....	Feb. 3, 1836
Cultivator.....	J. S. Eastman.....	Baltimore, Md.....	June 30, 1836
Cultivator.—See <i>Plough</i> .			
Cultivator.—See <i>Seeding</i> .			
Cultivator.....	Robert Nelson.....	West Point, Ia.....	Jan. 15, 1844
Cultivator.....	William Dyzert.....	Gettysburg, Pa.....	Aug. 16, 1844
Cultivator.....	Almond Harrison....	Blissfield, Mich.....	Sept. 2, 1845
Cultivator.....	Andrew Ralston.....	West Middleton, Pa...	Sept. 2, 1845
Cultivator.....	Allen Eldred.....	Oppenheim, N. Y....	Dec. 20, 1845
Cultivator.....	William Dyzert.....	Gettysburg, Pa.....	Aug. 28, 1846
Cultivator, American.....	Frederick Miner.....	New London, Conn...	Aug. 21, 1819
Cultivator, for beans and corn.....	Eliakim Spooner.....	Vermont.....	June 25, 1799
Cultivator, corn plough.....	John Hernly.....	East Hempfield, Pa...	Dec. 10, 1838
Cultivator, corn.....	John B. Smith.....	Norfolk, Va.....	April 15, 1839
Cultivator, corn, &c.....	Noah Barnes.....	Easthampton, N. Y...	Sept. 10, 1840
Cultivator, corn.....	Sam. Brady.....	Salona, N. Y.....	April 6, 1842
Cultivator, corn.....	Issachar Bates, Asa Wood, and D. Wells.	Adams, N. Y.....	May 28, 1842
Cultivator, cotton.....	William A. Rogers...	Sommerville, Ala...	April 1, 1842
Cultivator, garden*.....	John B. Smith.....	Norfolk, Va.....	April 10, 1839
Cultivator, or harrow.....	Waldren Beach.....	Philadelphia, Pa.....	Oct. 25, 1832
Cultivator, or hoe-harrow.....	N. J. Shuff.....	Bensalem, Pa.....	Nov. 26, 1836
Cultivator, revolving.....	George Whitlock.....	Crown Point, N. Y...	July 10, 1841
Cultivator and seed planter.....	R. H. Springstead...	Wooster, Ohio.....	Feb. 12, 1845
Cultivator, seeding.....	John Richard.....	Guilford t'nship, Pa.	Dec. 16, 1833
Cultivator, teeth.....	James Birdsall.....	Hamorton, Pa.....	Nov. 9, 1844
Cultivator, tooth.....	David B. Rogers.....	Stafford, N. Y.....	Nov. 1, 1845
Cultivator, tooth for.....	William Beach.....	Philadelphia, Pa.....	Nov. 8, 1825
Cultivator, tooth and harrows.....	Waldren Beach.....	Philadelphia, Pa.....	April 13, 1826
Cultivator, tooth for.....	Isaac Cobb.....	Westminster, Vt.....	Dec. 7, 1829
Cultivator, for thinning cott'n plants	John Weaver.....	Washington, D. C....	July 5, 1837
Cultivator for vines.....	John Mason.....	Union, N. J.....	May 28, 1842
Cultivator, and weeder.....	Simeon W. Marshall and J. W. Coburn...	Dracut, Mass.....	Oct. 3, 1838
Cultivator, weeding corn.....	Charles Hill.....	Essex county, Va...	July 7, 1814
Cutting cane, brush, &c.....	Edwin Owen.....	Byron, Ia.....	May 30, 1846
Cutting, circular scythe.....	John & Adam Rhodes	Union t'nship, N. Y...	Dec. 6, 1814
Cutting, cradle, for grain.....	Isaac Babcock.....	Rensselaerville, N. Y.	Mar. 24, 1823
Cutting, cradle, for grain.....	Edward Badlum, jr...	Chester, Vt.....	Sept. 18, 1835
Cutting, cradle, for hemp.....	Wilson L. Larimore...	Paris, Ky.....	April 25, 1837
Cutting, farmers' scythe.....	Theophilus Easton...	Albany, N. Y.....	Dec. 2, 1814
Cutting, fodder.....	Luke S. Rand.....	Townshend, Vt.....	Nov. 18, 1846

* Antedated October 10, 1836.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN MOVED.
Cutting, fodder.....	Jessop, Wambaugh, Ilgenfrits, & Baker....	York, Pa.....	Nov. 20, 1846
Cutting grain.....	Richard French, and J. T. Hawkins.....	New Jersey.....	May 17, 1803
Cutting grain.....	Samuel Adams.....	Bucks county, Pa....	Dec. 28, 1805
Cutting grain.....	John Comfort.....	Bridgewater, N. J....	Feb. 26, 1811
Cutting grain.....	James Ten Eyck.....	Hallowell, Maine.....	Nov. 2, 1825
Cutting grain.....	Samuel Lane.....	Plainfield, N. J.....	Aug. 8, 1828
Cutting grain.....	William Manning.....	Cincinnati, Ohio.....	May 3, 1831
Cutting grain.....	Obed Huzzey.....	Rhinebeck, N. Y.....	Dec. 31, 1833
Cutting grain*.....	Alexander H. Wilson.....	Buffalo, N. Y.....	Dec. 30, 1835
Cutting grain.....	William F. Ketchum.....	Chester county, Pa....	March 7, 1846
Cutting grain, all kinds.....	Cyrus H. McCormick.....	Jefferson co., Tenn....	June 21, 1834
Cutting grain, grass seed collector	D. Ashmore & J. Peck		Sept. 18, 1835
Cutting grain, &c., (harvesting machine).....	H. Moore & J. Hascall	Kalamazoo, Mich....	June 28, 1836
Cutting grain, horse power.....	Enoch Ambler.....	Root, N. Y.....	Dec. 23, 1834
Cutting grain, and rake.....	Abraham Rundell.....	Verona, N. Y.....	April 22, 1835
Cutting grass.....	Peter Gaillard.....	Lancaster, Pa.....	Dec. 4, 1812
Cutting grass.....	Peter Baker.....	Long Island, N. Y....	Feb. 19, 1814
Cutting grass.....	Jer. Bailey.....	Chester county, Pa....	Feb. 13, 1822
Cutting grass.....	E. Cope & J. Hoopes, jr.	Chester county, Pa....	May 18, 1825
Cutting grass.....	Erastus Ingersoll.....	Farmington, Mich....	May 7, 1830
Cutting grass.....	Richard Heath.....	West Newbury, Mass....	April 26, 1833
Cutting grass, &c.....	Thomas A. Anderson.....	McMinn co., Tenn....	June 29, 1833
Cutting grass.....	Wm. and T. Schnebly.....	Hagerstown, Md.....	Aug. 22, 1833
Cutting grass.....	Sturdivant and Holmes	Portland, Maine.....	June 19, 1835
Cutting grass.....	John P. Chandler.....	Milton, Maine.....	Aug. 17, 1835
Cutting grass.....	Henry Allen.....	Fayetteville, Tenn....	June 2, 1836
Cutting grass.....	John Drummond.....	Waterford, N. Y.....	June 30, 1836
Cutting grass.....	William C. Greenleaf.....	Andover, Maine.....	July 1, 1836
Cutting grass.....	Isaac Lard.....	Ashley, Mo.....	Nov. 20, 1846
Cutting grass.....	Andrew J. Cook.....	Delphi, Ind.....	Nov. 20, 1846
Cutting grass and grain.....	David Lewis, jr.....	Bern, N. Y.....	April 14, 1838
Cutting grass and grain.....	Ira Wheeler.....	Salem, N. H.....	May 30, 1838
Cutting grass and grain.....	Alexander M. Wilson.....	New York, N. Y.....	Sept. 3, 1846
Cutting and grinding fodder.....	Jacob Royer.....	Uniontown, Md.....	Mar. 12, 1845
Cutting and raking.....	Clinton Foster.....	Laporte, Ind.....	April 18, 1846
Cutting, horse scythe.....	John A. Wadsworth.....	Portsmouth, R. I.....	July 3, 1824
Cutting, and thrashing.....	E. Briggs and G. G. Carpenter.....	Fort Covington.....	Feb. 5, 1836
Cutting, scythe.....	Ezra Barnett.....	Warner, N. H.....	June 16, 1836
Cutting, scythe.....	S. Lamson.....	Cummington, Mass....	Oct. 29, 1836
Cutting, scythe fastenings.....	S. Lamson.....	Sterling, Mass.....	Nov. 25, 1834
Cutting, scythe hanging.....	Joseph Clapp and Erastus S. Clapp.....	Montague, Mass.....	July 16, 1838
Cutting, scythe snath.....	S. Lamson.....	Sterling, Mass.....	Dec. 29, 1828
Cutting, scythe snath.....	John Knight.....	Woodbury, N. J.....	April 7, 1831
Cutting, scythe snath.....	Dexter Pierce.....	Montague, Mass.....	Mar. 11, 1837
Cutting, scythe snath.....	Samuel Puffer.....	Sunderland, Mass....	April 7, 1838
Cutting, scythe snath moulds.....			
Cutting, wheat.....	William P. Claiborne.....	King William co., Va....	Nov. 8, 1811
Cutting, wheat.....	John S. Pleasants.....	Halifax county, Va....	July 28, 1827
Cutting, wheat.....	Bernard Jackson.....	Brown county, Ohio....	June 14, 1834
Dairy, cooler.....	David Whitmer.....	Paradise, Pa.....	Dec. 7, 1826
Drills, improvements in.....	Henry W. Smith.....	Paradise, Pa.....	Nov. 4, 1846
Fanning mill.....	David A. Fulk.....	Hockton, Pa.....	Oct. 6, 1843
Fanning mill.....	Lazarus B. McLain.....	New Lisbon, Ohio.....	
Farming machine and corn drop	per.—See Seeding.		
Fences, construction of.....	Joseph M. Stevens.....	Northumberland, N. Y.	July 20, 1846
Flax or hemp, gathering.....	William Brittain and John Silvers.....	New Hope, Pa.....	Nov. 25, 1838
Flax pullers.....	James H. Bennett.....	East Hennington, Vt....	Jan. 23, 1845
Fork, four tined.....	Granville Martin.....	Waterbury, Conn.....	June 13, 1823

* Renewed June 10, 1837.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Pork, four tined.....	Martin Stevens.....	New Haven, Conn.	April 16, 1824
Pork, four tined.....	Calvin Perkins.....	Waterbury, Conn.	Jan. 27, 1829
Pork, hay and dung.....	Christian Lawrence..	Chatham, N. Y....	July 26, 1823
Pork, pitch.....	Jered Byington.....	Hinesborough, Vt..	Jan. 12, 1813
Pork, steel spring.....	Charles Goodyear.....	Philadelphia.....	Sept. 7, 1831
Fruits, &c., drying.....	Stephen Strong.....	Wilkes township...	Sept. 2, 1811
Fruit gatherer.....	Alex' der McWilliams	Washington, D. C..	Mar. 13, 1844
Fruit, instrument for gathering...	William Sedgwick and John Brooks.....	Poughkeepsie, N. Y.	Oct. 3, 1846
Garden, geographical.....	George W. Cherry.....	Derby, Conn.....	May 27, 1825
Garlic machine.....	Samuel Fahrney.....	Boonsborough, Md.	Dec. 5, 1843
Garlic separators.....	William C. Grimes...	York, Pa.....	July 26, 1843
Grain cleaners.....	F. P. Root.....	Sweden, N. Y.....	Nov. 15, 1843
Grain cradles.....	Chester Goss.....	Madrid, N. Y.....	Feb. 16, 1843
Grain cutters.....	Jesse Reeder.....	Alton, Illinois.....	Jan. 20, 1843
Grain, machine for cleaning.....	Frederick A. Stuart..	Catharine, N. Y....	June 20, 1846
Grain, machine for cleaning.....	William H. Stephens.	Salem, Ill.....	July 7, 1846
Grain, measuring.....	Peter H. Schenck....	New York.....	Feb. 15, 1810
Graineries, wheat, &c.....	John Harmony.....	Chambersburg, Pa..	Aug. 20, 1835
Grain separators.....	Dennis Claude, jr....	Annapolis, Md.....	Feb. 24, 1843
Grubs and bushes, extracting from land.....	Young William Short	Oglethorpe co., Ga.	Jan. 28, 1840
Harrow, cleave.....	Lemuel Tam.....	Sussex county, Del.	July 11, 1826
Harrow, corn and grain cultivator	Nathaniel Stanton, jr.	Florida, N. Y.....	July 9, 1832
Harrow, corn and grain cultivator	Peter Clark.....	Aurora, N. Y.....	Aug. 20, 1825
Harrow, hoe.....	Aquila Newbern.....	Bristol, Pa.....	June 1, 1834
Harrow, hoe and plough.....	Jonathan Cheatham..	Providence Inn, Va.	July 31, 1827
Harrow, or polyshare.....	Frederick Brewster..	Burlington, Vt....	Jan. 24, 1833
Harrow, press.....	John C. Concklin....	Peekskill, N. Y....	April 21, 1836
Harrow, revolving.....	Samuel Rugg.....	Lancaster, Mass....	Jan. 11, 1831
Harrow, revolving, cylindrical...	James D. Woodside..	Washington, D. C..	July 28, 1832
Harrow, self-sharpening.....	H. Hopkins & J. Pratt	Pompey, N. Y.....	Nov. 9, 1824
Harrow, teeth.....	Wm. McConaughy.....	New Garden, Pa....	Dec. 8, 1823
Harrow, teeth.....	Wm. McConaughy.....	New Garden, Pa....	Feb. 16, 1827
Harrow, teeth.....	Perry Prettyman.....	Georgetown, Del....	April 3, 1834
Harrow, teeth fluke.....	Lemuel Tam.....	Milton, Del.....	Mar. 30, 1830
Harrow, revolving.....	Moses G. Cass.....	Utica, N. Y.....	Sept. 10, 1839
Harrow, sword-cutting.....	Dennis Rice.....	Rowe, Mass.....	May 17, 1844
Harvesting machine.....	Erastus C. West.....	Bradford, Vt.....	June 25, 1845
Hay and grain, covering.....	Francis Wright.....	Hallowell, Maine...	Mar. 19, 1833
Hay, preserving, &c.....	A. D. Ditmars.....	Chester county, Pa.	Feb. 15, 1836
Hay, spreading and turning.....	Joab Center.....	Hudson, N. Y.....	June 27, 1834
Hoe.....	Ephraim Kimball....	Fitchburg, Mass....	April 3, 1819
Hoe.....	Pardon H. Merrill....	Hillsdale, N. H....	April 6, 1820
Hoe.....	Joseph Watson.....	Canaan, Conn.....	July 26, 1823
Hoe.....	Paul Whiten.....	Northbridge, Mass..	Feb. 22, 1825
Hoe.....	C. H. Strong and C. A. Sterry.....	Norwich, Conn.....	Jan. 5, 1833
Hoe.....	George Harper.....	Montgomery co., Pa.	Nov. 19, 1833
Hoe.....	Adna Allen.....	Ramapoo, N. Y....	Jan. 23, 1836
Hoe.....	Benjamin Hinkley...	Fayette, Maine.....	June 23, 1832
Hoe, cast iron.....	Benjamin F. Boyden..	Boston, Mass.....	Mar. 31, 1836
Hoe, cast steel.....	Chauncey Bulkley....	Colchester, Conn...	Jan. 10, 1827
Hoe, fastening handles to.....	Reener Dare.....	Greenwich, N. J....	Feb. 14, 1832
Hoe, fastening handles to.....	George Hight.....	Gorham, Maine.....	May 25, 1838
Hoe, garden.....	Isaac Averill.....	Plymouth, Mich....	June 11, 1836
Hoes, garden.....	Charles S. Homer....	Boston, Mass.....	May 8, 1840
Hoes, to handles, attaching.....	Oliver Clark and Wm. D. Hillis.....	Hudson, Ohio.....	Sept. 9, 1843
Hoe, horse iron, for ploughing and weeding grain.....	William Carmichael..	Land Lake, N. Y....	July 28, 1827
Hoe, pronged.....	Joseph Wilson.....	Marlborough, N. H.	Sept. 20, 1827
Hoe, weeding and others.....	James A. Black.....	Columbia, S. C....	Oct. 13, 1828
Hoe, weeding and others.....	Gideon Freeborn.....	New York.....	July 7, 1829

INVENTIONS OR DISCOVERIES.	PATENTERS,	RESIDENCES.	WHEN ISSUED.
Hulling barley.....	Harry Handschy....	Bridgeville, Ohio....	Sept. 5, 1892
Hulling buckwheat, barley, &c....	Thomas Register....	West township, Ohio	April 5, 1892
Hulling clover machines.....	A. B. Crawford.....	Wooster, Ohio.....	Dec. 31, 1844
Hulling clover seed.....	Jacob Warrell.....	Pennsylvania.....	Feb. 27, 1804
Hulling clover seed.....	Michael Withers....	Lancaster, Pa.....	April 30, 1804
Hulling clover seed.....	Michael Zorger.....	York, Pa.....	May 10, 1805
Hulling clover seed.....	William Sampson and Cyrus Curtis.....	New Haven, Vt....	Jan. 6, 1808
Hulling clover seed.....	Samuel Condon.....	New Hartford, Conn	March 3, 1809
Hulling clover seed.....	Nehemiah Price....	Frederick co., Md..	March 2, 1811
Hulling clover seed.....	Henry Spickard....	Fincastle, Va.....	Aug. 16, 1814
Hulling clover seed.....	Samuel Arnold.....	Botetourt, Va.....	Jan. 25, 1815
Hulling clover seed.....	John Bolton.....	Warren, N. Y.....	Jan. 9, 1823
Hulling clover seed.....	William Loomis.....	Ashford, Conn.....	April 27, 1822
Hulling clover seed.....	Thomas D. Burrall..	Geneva, N. Y.....	June 5, 1823
Hulling clover seed.....	Isaac H. Haskins....	Columbia, N. Y....	May 6, 1824
Hulling clover seed.....	Benjamin Sutton....	Romulus, N. Y....	Feb. 10, 1825
Hulling clover seed.....	Jacob Gorgas.....	Fredericksburg, Pa.	Jan. 15, 1830
Hulling clover seed, &c.....	William Manning....	Westfield t'n's'ip, Pa.	Nov. 24, 1830
Hulling clover seed.....	Pierson Reading....	Trenton, N. J.....	Oct. 25, 1831
Hulling clover seed.....	Christopher Seabold, jr	New Berlin, Pa....	March 6, 1832
Hulling clover seed.....	George Monohon....	Augusta t'n'ship, Ohio	April 27, 1832
Hulling clover seed.....	Pierson Reading....	Trenton, N. J.....	July 31, 1832
Hulling clover seed.....	Geo. and Edw. Faber	Pittsburgh, Pa.....	Oct. 13, 1832
Hulling clover seed.....	Thomas Gollagher....	Fairfield county, Ohio	Feb. 28, 1833
Hulling clover seed.....	Jacob Gans.....	Fayette county, Pa.	Mar. 12, 1833
Hulling clover seed.....	Hildreth Robbins....	Wilton, Maine.....	Sept. 6, 1833
Hulling clover seed.....	Leonard Keep.....	Tyrone t'n'ship, Pa.	Dec. 16, 1833
Hulling clover seed.....	W. Kuhn, Geo. Hasin- ger, and W. Stiles..	Union county, Pa...	Dec. 24, 1833
Hulling clover seed.....	Christian Landes....	Mount Sidney, Va..	Dec. 24, 1833
Hulling clover seed.....	Israel Correll.....	New Philadelphia, O.	Dec. 31, 1833
Hulling clover seed.....	David Rankin.....	Augusta county, Va.	Mar. 18, 1834
Hulling clover seed.....	Elias Horn.....	Rochester co., Va..	Jan. 30, 1834
Hulling clover seed.....	William E. Lukens..	Cadiz, Ohio.....	Mar. 26, 1834
Hulling clover seed.....	William Rowe.....	Phillips, Maine.....	April 26, 1834
Hulling clover seed.....	Samuel M. Bailey....	Auteborough, Pa...	Aug. 23, 1834
Hulling clover seed.....	William C. Grimes..	York, Pa.....	Nov. 6, 1834
Hulling clover seed.....	William C. Grimes..	York, Pa.....	Nov. 8, 1834
Hulling clover seed.....	Stacy West.....	Hartford county, Md.	Jan. 16, 1835
Hulling clover seed.....	J. B. and W. F. Poague	Lexington, Va.....	Feb. 17, 1836
Hulling clover seed.....	Cyrus B. Baldwin....	Faircastle, Va.....	June 16, 1836
Hulling clover seed.....	Hildreth Robbins....	Kennebec, Maine....	June 20, 1836
Hulling clover seed.....	J. Hopper & A. Doughty	Moresborough, Pa..	June 30, 1836
Hulling clover seed.....	William M. Barton....	Cheek's Roads, Te.	Dec. 20, 1837
Hulling clover seed.....	Daniel Hunsicker....	Hartley, Pa.....	May 8, 1838
Hulling clover seed.....	Jacob Flook, of John.	Middlesex, Md.....	May 10, 1838
Hulling clover seed.—See <i>Threshing</i> .			
Hulling clover seed, and chopping grain.....	George Wales.....	Centre township, Pa.	July 24, 1832
Hulling clover seed, and cleaning.	Samuel White.....	Chambersburg, Pa..	Aug. 10, 1831
Hulling clover seed, and cleaning.	William Williams....	Buckingham t'n'ship, Pa.	Aug. 12, 1831
Hulling clover seed, and cleaning.	Alexander Matthews.	Island Creek, Ohio..	Dec. 13, 1831
Hulling clover seed, and cleaning.	Elisha Rider.....	Lovington, Va.....	Dec. 26, 1833
Hulling clover seed, and cleaning.	Benjamin Wood.....	Doylestown, Pa....	Aug. 11, 1834
Hulling clover seed, and cleaning.	Joseph Ross.....	Boundbrook, N. J..	Feb. 6, 1835
Hulling clover seed, and cleaning.	William C. Grimes...	York, Pa.....	March 3, 1841
Hulling clover seed, and other grass seed.....	Abraham Keagy.....	Morrison's Cove, Pa.	June 24, 1839
Hulling clover seed, and corn....	Robert Rittenhouse...	Arawell t'n'ship, Pa.	Mar. 19, 1833
Hulling clover seed, mill.....	John Bolton.....	Warren, N. Y.....	Jan. 9, 1823
Hulling clover seed, and rice.....	James W. Matthews & Matthew S. Kahle...	Lexington, Va.....	Jan. 17, 1834
Hulling clover seed, and rice.....	William H. Mansfield	Mifflintown, Pa....	June 6, 1846

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Hulling clover seed, and rice.....	Brayley and Walker.	Phillips, Maine.....	June 6, 1835
Hulling clover seed, and thrashing	Henry Bangs.....	New York.....	April 29, 1834
Hulling coffee.....	Nathan Read.....	Belfast, Maine.....	Sept. 10, 1832
Hulling coffee.....	Roswell Abbey.....	New York.....	Jan. 1, 1835
Hulling coffee berry.....	Isaac Adams.....	Boston, Mass.....	Jan. 13, 1835
Hulling coffee berry.....	Thomas Ditson.....	Boston, Mass.....	Jan. 13, 1835
Hulling cotton, clover, & other seed	John Whiteman.....	Philadelphia, Pa.....	June 26, 1835
Hulling cotton seed.....	Joseph Eve.....	Pennsylvania.....	Dec. 6, 1833
Hulling cotton seed.....	John Lineback.....	Salem, N. C.....	Mar. 31, 1814
Hulling cotton seed ^a	Francis Follet.....	Petersburg, Va.....	Jan. 21, 1839
Hulling cotton seed.....	Jabez Smith.....	Petersburg, Va.....	Dec. 28, 1839
Hulling cotton seed.....	Lancelot Johnson.....	Madison, Ga.....	May 29, 1833
Hulling cotton seed.....	Noel Mixon.....	Madison, Ga.....	Dec. 20, 1833
Hulling cotton seed.....	L. D. Cavarly.....	Waterford, Ct.....	Feb. 12, 1834
Hulling cotton seed.....	Henry Hubbard.....	Claremont, N. H.....	April 19, 1834
Hulling cotton seed.....	Miller & Lawes.....	Washing'n co., Miss	Oct. 27, 1835
Hulling cotton seed.....	Pierston Reading.....	Trenton, N. J.....	April 13, 1836
Hulling cotton seed, and breaking	Charles Beck & Wm. Jenks.....	Columbia, S. C.....	Dec. 17, 1834
Hulling cotton seed and rice.....	Jirah Kellogg.....	N. Hanover co., N. C.	Mar. 30, 1835
Hulling cotton seed.— <i>See Mills,</i> <i>Hulling grain.</i>	Class 8. Benj. Maltby & Malt- by Fowler.....	New Haven, Ct.....	Feb. 28, 1818
Hulling grain.....	Nathaniel Barrett.....	Paris, N. Y.....	Aug. 21, 1833
Hulling grain.....	William J. Hart.....	Talmadge, Ohio.....	May 21, 1824
Hulling grain, and cleaning.....	Orrin Lull.....	Utsego, N. Y.....	Aug. 25, 1832
Hulling grain, and cleaning.....	Jeduthan Cross.....	Centre Lisle, N. Y..	Oct. 8, 1838
Hulling grain and rice.....	Benj. Maltby & Malt- by Fowler.....	New Haven, Ct.....	Feb. 28, 1818
Hulling grass seed.....	Thatcher Blake.....	Paris, Me.....	July 12, 1822
Hulling, husking, & shelling corn†	Samuel S. Allen.....	Miamisburg, Ohio.....	Jan. 15, 1840
Hulling machines.....	James McGregor.....	Saratoga, N. Y.....	May 12, 1840
Hulling machine, cylindrical.....	Sebastian Houpt.....	Philadelphia, Pa.....	Nov. 16, 1812
Hulling machine, separating seeds, &c.....	G. McA. Brown.....	Northumber'd co. Va	Mar. 19, 1812
Hulling oats, barley, &c.....	J. Andrews & E. Piper.	Camden, Me.....	Dec. 10, 1840
Hulling rice.....	Christopher Hoxie...	New York.....	Jan. 7, 1803
Hulling rice.....	Sherman Dewy.....	Hartford, Ct.....	Mar. 2, 1811
Hulling rice.....	John Ravenel.....	Charleston, S. C.....	Jan. 29, 1830
Hulling rice.....	Joshua M. Buskey...	New York.....	Oct. 25, 1832
Hulling rice.....	John W. Walker.....	Madison, Ga.....	Dec. 16, 1833
Hulling rice.....	Lewis Cole.....	New Gloucester, Me	June 16, 1836
Hulling rice.....	C. H. Harvey & E. Tracy.....	Poughkeepsie, N.Y.	May 30, 1837
Hulling rice.— <i>See Thrashing.</i> Hulling rice and barley.....	John L. Norton.....	Charleston, S. C....	May 7, 1830
Hulling rice and barley.....	T. F. Strong & M. T. Moody.....	Northampton, Mass.	Nov. 17, 1832
Hulling rice and barley.....	T. F. Strong & M. T. Moody.....	Northampton, Mass.	April 26, 1833
Hulling rice and barley.....	Eleazer Carver.....	Bridgewater, Mass..	Sept. 23, 1836
Hulling rice, beating out.....	John Beck & Joseph Coppering.....	Beck's Ferry, S. C..	Mar. 19, 1810
Hulling rice, cleaning.....	James Dellel.....	Pennsylvania.....	Dec. 23, 1796
Hulling rice, cleaning.....	Jonathan Lucas, jr.....	Charleston, S. C.....	July 12, 1808
Hulling rice, cleaning.....	John T. Rickets.....	Cameron Run, Va.....	Aug. 8, 1808
Hulling rice, cleaning.....	Roswell King.....	Darien, Ga.....	Nov. 21, 1809
Hulling rice, cleaning.....	Richard French.....	Morrisville, Pa.....	Oct. 13, 1820
Hulling rice, cleaning.....	Lazarus Ruggles.....	New York.....	Oct. 12, 1821
Hulling rice, cleaning.....	Elihu Spencer.....	New Haven, Ct.....	Dec. 5, 1821
Hulling rice, cleaning.....	Alexander Shinie.....	Charleston, S. C....	Dec. 21, 1825
Hulling rice, cleaning.....	John L. Norton.....	New York.....	Mar. 10, 1826
Hulling rice, cleaning.....	John Campbell.....	Winnaborough, S.C.	May 31, 1827
Hulling rice and coffee.....	Elijah Wilder.....	Jersey City, N. J....	Nov. 6, 1827

* Reissued December 15, 1839.

† Additional improvement, March 20, 1841.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN MADE.
Hulling rice and coffee.....	Zenos Brownson.....	Jasper co., Ga.....	July 7, 1839
Hulling rice and grain.....	Maltby Fowler.....	New Haven, Ct.....	July 28, 1839
Hulling rice, machine.....	John Ravenel.....	Charleston, S. C.....	May 17, 1839
Hulling rice, machine.....	Asa Nourse.....	Beaufort, S. C.....	July 19, 1839
Hulling rice, mill.....	Asa Nourse.....	Charleston, S. C.....	April 3, 1839
Hulling rice, mill, steam.....	John L. Norton.....	Charleston, S. C.....	Dec. 16, 1839
Hulling rice, mortar, for dressing.	James J. Cordes.....	London, England.....	Sept. 19, 1839
Hulling rice, polishing.....	Jos. Beach & S. Starr.	Middletown, Ct.....	May 10, 1839
Hulling rice, polishing.....	T. F. Strong & M. T. Moody.....	Northampton, Mass.	Aug. 29, 1839
Hulling rice, polishing.....	Jonathan Lucas.....	Charleston, S. C.....	Nov. 6, 1819
Hulling rice, polishing.....	William Scarbrough.....	Savannah, Ga.....	April 14, 1835
Hulling rice, pounding.....	Alexander D. Moore.....	New Hanover, N.C.	Jan. 19, 1809
Hulling rice, pounding.....	Asa Nourse.....	St. Luke's, S. C.....	July 5, 1814
Hulling rice, pounding husks....	Jacob Reed.....	Charleston, S. C.....	June 9, 1809
Hulling rice, and rubbing wheat.	Alfred Duvall & Wm. J. Duvall.....	Baltimore, Md.....	Jan. 9, 1838
Hulling rice, scouring.....	Robert Grant.....	South Carolina.....	Oct. 17, 1796
Hulling rice, scouring.....	Samuel Mulliken.....	.....	Feb. 20, 1797
Hulling rice, and working trip hammer.....	Joseph Beach.....	Middletown, Ct.....	Oct. 1, 1830
Hulling rice, &c.....	Warner Groat.....	Troy, N. Y.....	Aug. 28, 1840
Hulling rice, machinery for.....	Daniel Tomlinson.....	Brookfield, Ct.....	May 12, 1840
Hulling rice, machinery for.....	William C. Grimes.....	York, Pa.....	Oct. 8, 1840
Hulling rice and other grains....	Webster Herrick.....	Northampton, Mass.	June 26, 1841
Hulling and pearling rice.....	Jacob Groat.....	Troy, N. Y.....	July 11, 1844
Hulling and peeling rice.....	Clark Jacobs.....	Brooklyn, N. Y.....	Sept. 3, 1846
Land, clearing.....	Thomas Oxley.....	Norfolk, Va.....	April 18, 1821
Lime, spreading.....	Mark L. Wilson.....	Quakertown, Pa.....	June 22, 1832
Lime, spreading.....	Francis H. Smith.....	Baltimore, Md.....	July 5, 1837
Lime, spreading and sowing.....	Levi Rice.....	Chester, Pa.....	Aug. 31, 1837
Lime, &c., spreading.....	And'w Krauss & Joel Krauss.....	Upper Milford, Pa..	Oct. 16, 1830
Lime, &c., spreading.....	Julius Hatch.....	Great Bend, Pa.....	Aug. 17, 1835
Lime, &c., spreading.....	Daniel F. Hall.....	Plainfield, N. J.....	Feb. 10, 1838
Lime, &c., sowing.....	Julius Hatch.....	Great Bend, Pa.....	Aug. 17, 1835
Manure and compost.....	Anthony D. Martin.....	Baltimore, Md.....	June 2, 1819
Manure, making.....	C. Baer & J. Gouliart.	Baltimore, Md.....	June 24, 1843
Milk, can for.....	Artemas Crittenden..	West Turin, N. Y..	July 14, 1832
Milk, preparing for butter & cheese	.....	.....	.....
Milk, preserving.....	John L. Granger.....	New York city.....	Mar. 19, 1836
Mowing.—See Outting.	.....	.....	.....
Mowing, cutting, and gathering flax, hemp, &c.....	Richard M. Cooch...	Lambertsville, N. J.	July 16, 1841
Mowing, cutting grass under water	Jacob Hinds.....	Hindsburg, N. Y...	Sept. 5, 1840
Mowing, cutting, & cleaning grain	C. Brown & F. S. Crans	Barton, N. Y.....	April 6, 1842
Mowing, grain cradles.....	Wm. A. Wood & J. C. Loveland.....	Hoosick Falls, N.Y.	Nov. 13, 1844
Mowing, harvesting grain.....	Alfred Churchill.....	Geneva, Ill.....	Mar. 16, 1841
Mowing, harvesting machines, cutting, threshing, and winnowing grain.....	Damon A. Church.....	Friendship, N. Y...	May 4, 1841
Mowing, harvesting machines....	George Esterly.....	Heart Prairie, W. T.	Oct. 22, 1844
Mowing, hemp cradles.....	Griffin Reynolds, jr...	Washington, Ky...	May 30, 1844
Mowing machine.....	Asa P. Trask & Davis Aldrich.....	Ellington, N. Y....	Oct. 16, 1839
Mowing machine.....	Seth Lamb.....	New York.....	June 20, 1840
Mowing, reaping machines.....	William F. Ketchum...	Buffalo, N. Y.....	Nov. 18, 1844
Mowing, reaping machine.....	Cyrus H. McCormick	Rockbridge, Va.....	Jan. 31, 1845
Mowing, reaping machine.....	Ferdinand Woodward	Upper Freehold, N.J.	Sept. 30, 1845
Mowing, scythes to snaths attaching.....	Ebenezer G. Lamson.	Shelburne, Mass....	July 2, 1839
Mowing, scythes, fastening the thole upon the snath.	Selah W. Fox & Aretas Ferry.....	Bernardstown, Mass.	Aug. 4, 1841

* Ante dated August 11, 1837.

† Reissued January 9, 1836.

‡ Ante dated Nov. 9, 1844.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN MADE.
Mowing, scythes, securing upon the snath and fastening the nib to the same.....	Silas Lamson.....	Shelburne Falls, Mass.	July 1, 1841
Mowing scythes, fastening the nibs of.....	Samuel Garfield, ass'te of Thos. W. Harvey	Jamestown, N. Y.....	April 6, 1842
Plant, applicable to various uses..	Charles Whitlaw.....	New York.....	Jan. 11, 1812
Plants, insects, &c., mode of destroying.....	Joseph Nicholas.....	La Fourche, La.....	June 13, 1831
Planting machine.....	Enoch Woods.....	Beloit, Wisconsin T.....	Jan. 10, 1845
Plough.....	Charles Newbold.....	New Jersey.....	June 26, 1797
Plough.....	John Deaver.....	Baltimore, Md.....	June 12, 1804
Plough.....	David Peacock.....	Burlington, N. J.....	April 1, 1807
Plough.....	Hez. Harris.....	Bullitt, Ky.....	Feb. 24, 1808
Plough.....	Richard B. Chenoweth	Baltimore, Md.....	Nov. 25, 1808
Plough.....	John Klay.....	Fredericktown, Md.....	Jan. 11, 1812
Plough.....	Roswell Tonaley.....	Cayuga co., N. Y.....	Jan. 11, 1812
Plough.....	John Seitz.....	Strasburg, Pa.....	Feb. 8, 1813
Plough.....	Matthew Patrick.....	Scipio, N. Y.....	June 2, 1813
Plough.....	Matthew Murray.....	Middletown, Md.....	Aug. 7, 1813
Plough.....	Horace Pease.....	Enfield, Ct.....	Aug. 28, 1813
Plough.....	Jethro Wood.....	Scipio, N. Y.....	July 1, 1814
Plough.....	John Swann.....	Scipio, N. Y.....	July 5, 1814
Plough.....	J. Morgan & J. B. Harris.....	Scipio, N. Y.....	Oct. 11, 1814
Plough.....	Henry Shultze.....	Lancaster, Pa.....	Dec. 17, 1814
Plough.....	David Peacock.....	New Mills, N. J.....	May 29, 1817
Plough.....	Gideon Davis.....	Sandy Spring, Md.....	May 26, 1818
Plough.....	Samuel Ogle.....	Graceland, Md.....	June 9, 1818
Plough.....	Perry Miller.....	Washington co., N. Y.	Oct. 26, 1818
Plough.....	Lemuel Goodrich and John Adams.....	Hudson, N. Y.....	Dec. 3, 1818
Plough.....	Richard N. Harrison.....	New York.....	Dec. 19, 1818
Plough.....	George D. Avery.....	Wood co., Va.....	Dec. 28, 1818
Plough.....	Stephen McCormick.....	Fauquier c. h., Va.....	Feb. 3, 1819
Plough.....	Zadock Harris.....	Hartford, N. Y.....	Mar. 17, 1819
Plough.....	A. Tice & Isaac Tice.....	Union Village, N. Y.....	Aug. 21, 1819
Plough*.....	Jethro Wood.....	Poplar Ridge, N. Y.....	Sept. 1, 1819
Plough.....	Cornelius Bergen.....	Brooklyn, N. Y.....	Nov. 11, 1819
Plough.....	James Swartwout.....	Taghkanic, N. Y.....	Nov. 13, 1819
Plough.....	P. H. Marshall and Jacob B. Smith.....	Lambertville, N. J.....	Mar. 3, 1820
Plough.....	George Gibbs.....	New York.....	Mar. 8, 1820
Plough.....	John W. Jenkins.....	Hudson, N. Y.....	July 6, 1820
Plough.....	John S. Wright.....	Greenwich, N. Y.....	July 28, 1820
Plough.....	R. & E. A. Stephens.....	Hoboken, N. J.....	Sept. 13, 1820
Plough.....	Chas. Wood & Gilbert Brundage.....	Bloomington, N. Y.....	Nov. 9, 1820
Plough.....	O. Phelps & G. Moorehouse.....	Lansing, N. Y.....	Nov. 17, 1821
Plough.....	David Peacock.....	Northampton, N. J.....	Jan. 21, 1822
Plough.....	William G. Stuart.....	Orange co., N. Y.....	Feb. 5, 1822
Plough.....	C. G. Gill and James Gill (B. S.).....	Chester, S. C.....	Mar. 25, 1822
Plough.....	John Gibson.....	Montgomery co. N. Y.	May 2, 1822
Plough.....	Abijah Lee.....	West Chester, N. Y.....	July 22, 1822
Plough.....	Joseph Woolley.....	Troy, N. Y.....	Sept. 14, 1822
Plough.....	Peter J. Clute.....	Schenectady, N. Y.....	Nov. 16, 1822
Plough.....	Ryland Rhodes.....	Albemarle co., Va.....	Feb. 25, 1823
Plough.....	George Nixon.....	New York.....	June 3, 1823
Plough.....	David Hitchcock.....	New York.....	July 16, 1823
Plough.....	Obed Hackney.....	Lebanon, Ohio.....	Aug. 29, 1823
Plough.....	John Nash.....	Talmage, Ohio.....	Oct. 14, 1823
Plough.....	A. Spicer, jr. and J. Tower.....	Portage towns'p, Talmage co., Ohio.....	Sept. 25, 1824

Disclaimer, Feb. 24, 1836, May 26, 1836; renewed from 31st Aug., 1833, by act of Congress of May 19, 1832.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Plough.....	James Y. Hunt.....	Turnbridge, Vt.....	Dec. 24, 1822
Plough.....	Garland Ellington.....	Madison co., Ala.....	Dec. 25, 1824
Plough.....	Phineas Pettis.....	Portage co., Ohio.....	Feb. 15, 1825
Plough.....	George D. Avery.....	Georgetown, D. C.....	Feb. 15, 1825
Plough.....	George D. Avery.....	Georgetown, D. C.....	Mar. 25, 1825
Plough.....	Stephen W. Whitman.....	Harpersfield, Ohio.....	May 7, 1825
Plough*.....	Gideon Davis.....	Georgetown, D. C.....	Oct. 1, 1825
Plough†.....	Stephen McCormick.....	Fauquier, Va.....	Jan. 28, 1826
Plough.....	William Cocke.....	Luzerne towns'p, Pa.....	April 26, 1826
Plough.....	Z. S. Holbridge & H. S. Lawson.....	Byrne, N. Y.....	Aug. 9, 1826
Plough.....	Ryland Rhodes.....	Charlottesville, Va.....	Feb. 20, 1827
Plough.....	William Beach.....	Philadelphia, Pa.....	June 27, 1827
Plough.....	William Wiard.....	Avon, N. Y.....	Jan. 26, 1828
Plough.....	Richard Loveridge.....	Knox co., Ohio.....	Mar. 8, 1828
Plough.....	Charles Howard.....	Hingham, Mass.....	Mar. 10, 1828
Plough.....	John Deats.....	Middletown, Pa.....	April 26, 1828
Plough.....	James Boatwright.....	Columbia, S. C.....	June 11, 1829
Plough.....	John Rhodes.....	Urbana, Ohio.....	June 11, 1829
Plough.....	Thomas Brown.....	New York.....	Sept. 11, 1829
Plough†.....	Timothy Miller.....	Pittsburgh, Pa.....	Oct. 23, 1829
Plough.....	John Anthony.....	Zanesville, Ohio.....	Feb. 1, 1831
Plough.....	Timothy Miller.....	Pittsburgh, Pa.....	Feb. 15, 1831
Plough.....	Barnabas Thacker, jr.....	Barnstable, Mass.....	July 20, 1831
Plough.....	Wm. Savage & Hezekiah Davidson.....	Horsewell, Ky.....	Aug. 24, 1831
Plough.....	William Black.....	Ann Arundel co., Md.....	Oct. 4, 1831
Plough.....	John Carothers.....	Shirleysburg, Pa.....	Dec. 10, 1831
Plough§.....	Horace ass. of J. Deats.....	Roxbury, N. J.....	Dec. 28, 1831
Plough.....	Thomas A. Whities.....	Bellefontaine, Ohio.....	Jan. 14, 1832
Plough.....	S. Witherow, ass'e of Samuel Ogle.....	Adams co., Pa.....	Feb. 26, 1832
Plough.....	Joseph Dudley.....	Fleming co., Ky.....	May 8, 1832
Plough.....	George Crowl.....	Sleepy creek, Va.....	June 27, 1832
Plough.....	George Wolf.....	Fairfield co., Ohio.....	June 27, 1832
Plough.....	John Moore.....	Cynthiana, Ky.....	Aug. 17, 1832
Plough.....	George W. Palmer.....	Jefferson towns'p, O.....	Aug. 17, 1832
Plough.....	John Weaver.....	Brownsville, Pa.....	Aug. 17, 1832
Plough†.....	John Buch.....	East Rushville, Ohio.....	Dec. 28, 1832
Plough.....	Harry Speihlman and Daniel Miller.....	Lancaster, Pa.....	Mar. 25, 1833
Plough.....	Lewis Donnell.....	Jefferson towns'p, O.....	July 23, 1833
Plough.....	Charles B. Taylor.....	Bainbridge, Ohio.....	Aug. 23, 1833
Plough.....	Elisha Kelley.....	Bainbridge, Ohio.....	Aug. 26, 1833
Plough.....	Sarah Evans, ex'x, & J. McFaden, ex'or of G. Evans.....	Pittsburgh, Pa.....	Sept. 18, 1833
Plough.....	Joseph P. Sharp.....	Genesee, N. Y.....	Dec. 20, 1833
Plough.....	David Staebler.....	Lancaster, Pa.....	Mar. 15, 1834
Plough.....	John Morford.....	Maysville, Ky.....	April 8, 1834
Plough.....	Shem Zook.....	Armagh towns'p, Pa.....	June 18, 1834
Plough.....	James Jacobs.....	Maysville, Ky.....	July 8, 1834
Plough.....	James Jacobs.....	Maysville, Ky.....	July 8, 1834
Plough.....	Henry Peachey.....	Philadelphia, Pa.....	July 25, 1834
Plough.....	Joseph Cromwell.....	Cynthiana, Ky.....	Oct. 9, 1834
Plough.....	David Ghormley.....	Wayne township, O.....	Feb. 13, 1835
Plough.....	Nathan Robinson.....	Sackett's Harb., N. Y.....	Feb. 13, 1835
Plough.....	Joseph Tinkler.....	Warwick towns'p, O.....	Mar. 2, 1835
Plough.....	Nathan Baker.....	Penn towns'p, M. T.....	Mar. 24, 1835
Plough.....	William Hess.....	Lower Saucon, Pa.....	Mar. 27, 1835
Plough.....	Samuel Cline.....	Plumstead, Pa.....	July 17, 1835
Plough.....	P. Stahl & John Diefenbacher.....	Turbet, Pa.....	Sept. 18, 1835

* Reissued March 6, 1833.

§ Reissued May 16, 1841.

† Reissued October 22, 1836.

‡ Disclaimer, May 7, 1838.

‡ Reissued July 17, 1835.

INVENTORS OR DISCOVERERS.	PATENTERS.	RESIDENCE.	WEEK ISSUED.
Plough.....	William Walker.....	Washingtonville, Pa.	Oct. 6, 1836
Plough.....	Jarius S. Tefft.....	Amherst, N. Y.....	Oct. 17, 1836
Plough.....	John Dolhaner.....	Canton, Ohio.....	Jan. 15, 1836
Plough.....	Samuel Witherow.....	Gettysburg, Pa.....	Jan. 15, 1836
Plough.....	J. J. Chandler and P. Ranger.....	Milton, Me.....	Jan. 20, 1836
Plough.....	William P. Cannon.....	Monroe co., Tenn..	Mar. 4, 1836
Plough.....	D. Prouty & J. Mears	Boston, Mass.....	Mar. 4, 1836
Plough.....	John Farlee.....	Mercer co., Ky.....	April 21, 1836
Plough.....	Nathan Locklin.....	Sparta, N. Y.....	April 28, 1836
Plough.....	Jacob Plank.....	Carlisle, Pa.....	June 2, 1836
Plough.....	Joshua Gibbs.....	Canton, Ohio.....	June 16, 1836
Plough.....	Timothy Miller.....	Pittsburgh, Pa.....	July 2, 1836
Plough.....	Isaac Snider.....	Mount Pleasant, Pa.	July 2, 1836
Plough.....	J. M. Tilford.....	Murfreesboro', Tenn	July 1, 1836
Plough.....	B. Woodcock.....	Mount Pleasant, Pa.	Nov. 23, 1836
Plough.....	Bancroft Woodcock..	Mount Pleasant, Pa.	June 14, 1837
Plough.....	S. Hartpence & John D. Bowne.....	Kingwood, N. J....	July 5, 1837
Plough.....	John C. Smith.....	Kingwood, N. J....	July 11, 1837
Plough.....	Job B. Norton.....	Philadelphia, Pa....	July 17, 1837
Plough.....	Isaac Snider.....	Mount Pleasant, Pa.	July 17, 1837
Plough.....	John Deats.....	Roxbury, N. J.....	July 31, 1837
Plough.....	Stephen McCormick..	Auburn, Pa.....	Dec. 1, 1837
Plough.....	William T. Sprouse..	Sangamon, Ill.....	Feb. 15, 1838
Plough.....	Henry Taylor.....	Montague, Mass....	May 17, 1838
Plough.....	D. Prouty & J. Mears	Boston, Mass.....	Sept. 15, 1838
Plough.....	John Deats.....	Roxbury, N. J.....	Nov. 25, 1838
Plough.....	William Small.....	North Argyle, Mass	April 22, 1839
Plough.....	Ebenezer G. Whiting.	Racine, Wiscon.Ter.	July 11, 1839
Plough.....	Ambrose Barnaby....	Ithaca, N. Y.....	Sept. 11, 1839
Plough.....	Josiah Dutcher.....	New York, N. Y....	Oct. 9, 1839
Plough.....	William Bryant.....	Davidson co., Ten..	Mar. 31, 1840
Plough.....	George Watt.....	Gainesville, Ala....	April 11, 1842
Plough.....	Thomas Wiard.....	Avon, N. Y.....	April 16, 1842
Plough.....	Nathan Hull.....	De Kalb, Miss.....	May 12, 1842
Plough.....	Cornelius Bergen....	Brooklyn, N. Y....	May 16, 1842
Plough.....	Barnabas Langdon....	Troy, N. Y.....	June 22, 1842
Plough.....	Samuel Myers.....	Marion, Ohio.....	July 11, 1842
Plough.....	Jarius S. Tefft.....	Amherst, N. Y.....	Aug. 25, 1842
Plough.....	Hiram L. Norton.....	Granville, N. Y....	Sept. 23, 1842
Plough.....	Abner Teague.....	Jackson, Tenn.....	Mar. 10, 1843
Plough.....	William Ogle.....	Frederick, Md.....	April 6, 1843
Plough.....	Jeremiah Gallatin..	Manchester, Ohio...	April 15, 1843
Plough.....	Harvey H. May.....	Galebury, Ill.....	May 2, 1843
Plough.....	John Nash.....	Middlebury, Ohio...	May 26, 1843
Plough.....	Thomas B. Quigley....	Mansfield, Ohio...	June 14, 1843
Plough.....	John Moore.....	Lexington, Ky.....	July 22, 1843
Plough.....	William Black.....	Scott co., Ill.....	Sept. 14, 1843
Plough.....	Joel S. Eastman, ass't of George Clezy....	Baltimore, Md.....	Sept. 14, 1843
Plough.....	W. & M. C. Walker..	Washingtonville, Pa.	Oct. 20, 1843
Plough.....	James M. Moore.....	Wilmington, Del...	Nov. 24, 1843
Plough.....	John Thompson.....	Ripley, Ohio.....	April 17, 1844
Plough.....	Aaron Smith.....	Bloomfield, Mich...	May 6, 1844
Plough.....	Jonathan Mooers.....	Hazleton, Pa.....	July 1, 1844
Plough.....	Anthony Taylor.....	New Garden, Ohio...	Dec. 19, 1844
Plough.....	Bancroft Woodcock..	Wheeling, Va.....	Jan. 31, 1845
Plough.....	Seth J. Roberts.....	Jeffersonville, Pa...	Feb. 12, 1845
Plough.....	Ephraim Ball.....	Greentown, Ohio...	Feb. 20, 1845
Plough.....	Samuel Shearer.....	Big Prairie, Ohio...	July 14, 1845
Plough.....	William Bullock.....	Jersey City, N. J...	July 30, 1845
Plough.....	John Ball.....	Greentown, Ohio...	Nov. 8, 1845
Plough.....	Samuel Witherow....	Gettysburg, Pa.....	April 18, 1846

* Re-issued Nov. 23, 1837; additional improvement Sept. 26, 1838.

INVENTIONS OR DISCOVERIES.	PATENTERS.	KNOWLEDGE.	WHEN ISSUED.
Plough*.....	H. H. May.....	Galesburg, Ill.....	April 25, 1846
Plough.....	James Johnson.....	Wooster, Ohio.....	May 30, 1846
Plough.....	John M. Cullen.....	Benton, Miss.....	May 30, 1846
Plough.....	Charles L. Meech.....	Preston, Ct.....	May 28, 1846
Plough.....	Samuel Wilt.....	Hagerstown, Md.....	Sept. 3, 1846
Plough.....	Jno. & Cyrus Krauser	Reading, Pa.....	Sept. 5, 1846
Plough, adjusting.....	William K. Allan.....	Brownston, Ky.....	Jan. 31, 1844
Plough, agricultural.....	Abel D. Armstrong.....	Springfield, Ohio.....	Jan. 15, 1830
Plough, altering the set of the same	Marshall Mims & Seaborn J. Mims.....	Starkville, Miss.....	Dec. 23, 1841
Plough, angular.....	John Lupton.....	Virginia.....	July 31, 1817
Plough, auburn.....	Wm. F. Richardson.....	Auburn, N. Y.....	June 28, 1825
Plough, bar-share.....	John & Joshua Butler.....	Brandywine & Chester counties, Pa.....	Mar. 1, 1814
Plough, bar-share.....	Eli Pugh.....	Chatham co., N. C.....	Dec. 24, 1827
Plough, bar-share.....	John Deakyns.....	Petersburg, Va.....	Nov. 18, 1828
Plough, bar-share.....	Adam Mitchell.....	Washington co., Ten.....	Oct. 1, 1830
Plough, bar-share.....	Samson Felton.....	Huntington, Pa.....	Nov. 1, 1830
Plough, bar-share.....	Edward M. Waggenet.....	Adair co., Ky.....	Jan. 12, 1831
Plough, bar-share.....	Moses Huffman.....	Elizabeth, Tenn.....	Dec. 28, 1830
Plough beams.....	Joel Houghton.....	Ogden, N. Y.....	June 22, 1842
Plough, breaking & cultivating, &c.	Guy Gray.....	Industry, Maine.....	Sept. 18, 1835
Plough, bull.....	Sylvanus Tonsley.....	Onondaga co., N. Y.....	May 28, 1813
Plough, bull.....	R. Tonsley & J. Swann.....	Hickory Grove, Ill.....	Feb. 20, 1835
Plough, carey bull.....	Benjamin Johnson.....	Rockingham, Vt.....	Dec. 14, 1820
Plough, cast iron.....	John Seaver & J. Fay.....	Hoboken, N. J.....	April 23, 1821
Plough, cast iron.....	A. L. & E. A. Stephens.....	Red Hook, N. Y.....	June 20, 1821
Plough, cast iron.....	George J. King.....	Pottstown, Pa.....	Aug. 27, 1821
Plough, cast iron.....	Obed Seely.....	New York.....	Sept. 13, 1821
Plough, cast iron.....	William Falconer.....	New York.....	Dec. 29, 1821
Plough, cast iron.....	David Hitchcock.....	Durham, N. Y.....	Feb. 12, 1822
Plough, cast iron.....	Josiah Dutcher.....	Windsor co., Vt.....	Feb. 16, 1822
Plough, cast iron.....	G. W. Hawkins & H. Emery.....	Ulster and Dutchess co., N. Y.....	Dec. 7, 1822
Plough, cast iron.....	J. J. Schoonmaker & J. Dolson.....	Newton, N. J.....	April 16, 1824
Plough, cast iron.....	Thomas Altason.....	Vernon, N. Y.....	May 11, 1824
Plough, cast iron.....	Ross Winans.....	Palmyra, N. Y.....	Aug. 4, 1824
Plough, cast iron.....	D. Chase and A. & J. Gregg.....	St. Johnsbury, Vt.....	April 19, 1826
Plough, cast iron.....	Thaddeus Fairbanks.....	Warren co., Ohio.....	May 18, 1827
Plough, cast iron.....	Robert Sweeny.....	Urbana, Ohio.....	June 11, 1829
Plough, cast iron.....	Jacob Minturn.....	Washington, Del.....	April 21, 1830
Plough, cast iron.....	Derrick Barnard.....	Gregg township, Pa.....	May 21, 1830
Plough, cast iron.....	Charles Pawling.....	Toboyne towns'p, Pa.....	May 25, 1830
Plough, cast iron.....	Samuel Nisbet.....	Harrisburg, Pa.....	June 9, 1830
Plough, cast iron.....	Jacob Yager.....	Green towns'p, Ohio.....	Dec. 26, 1833
Plough, cast iron.....	Anthony Taylor.....	Cayuga co., N. Y.....	April 24, 1834
Plough, cast iron, cutter for.....	Jonathan Swann.....	Addison, Vt.....	Jan. 29, 1824
Plough, cast iron, double pointed wing.....	William C. Pancost.....	Deruyter, N. Y.....	April 12, 1826
Plough, cast iron, hill side, double nose.....	John Shephard.....	Boston, Mass.....	Aug. 3, 1838
Plough, cast iron, malleable.....	Cyrus Alger.....	Talmage towns'p, O.....	Sept. 24, 1824
Plough, cast iron, or wrought.....	Nathaniel Gillet, jr.....	Middlebury, Ohio.....	Dec. 14, 1841
Plough, cast iron.....	Reuben McMillen.....	Columbus, N. J.....	June 20, 1838
Plough, clevis.....	Aaron Carman.....	Chambersburg, Pa.....	Nov. 26, 1845
Plough, clevis.....	Patrick Gallagher.....	New Britain, Pa.....	Nov. 12, 1830
Plough, combined.....	Samuel Clime.....	Bakersville, Md.....	April 8, 1840
Plough, combined.....	Jonathan Knodle.....	Dublin, Ind.....	Dec. 12, 1842
Plough, combined.....	James Parsons, jr.....	Payson, Ill.....	Mar. 9, 1844
Plough, combined.....	Harvey Brown.....	Fredericktown, Md.....	Sept. 7, 1811
Plough, common.....	Nicholas Turbutt.....		

* Antedated Jan. 27, 1846.

† Antedated May 26, 1845.

‡ Released Oct. 15, 1836.

INVENTIONS OR DISCOVERIES.	PATENTERS.	PLACES.	DATE GRANTED.
Plough, construction and action of, &c.....	Henry Peachey.....	Washington, D. C..	April 5, 1833
Plough, construction of.....	D. Prouty & J. Mears	Dorchester, Mass...	June 16, 1841
Plough, corn.....	N. Etheridge, G. Heath, & J. G. Glynn.....	Little Falls, N. Y....	July 23, 1831
Plough, corn.....	Isaac Edwards.....	Paoli, Ind.....	Sept. 19, 1846
Plough, cotton.....	Harvey W. Pitts.....	Wilsonville, Ala....	Mar. 31, 1836
Plough, coulter and shares.....	Samuel A. Sperry.....	Ann Arborville, M. T.	Oct. 27, 1835
Plough, coupling, &c.....	J. Card & G. Newell.	Meator, Ohio.....	Nov. 9, 1839
Plough, cultivating.....	Marshall J. Hunt.....	Cincinnati, Ohio....	Sept. 30, 1842
Plough, cultivator and planter combined, for ploughing at one operation.	Wm. H. Rider, ass'ee of Justus Rider.....	Belleville, Ill..... } Woodburn, Ill..... }	Mar. 12, 1841
Plough, cutter and points for....	D. H. Jones & W. F. Richardson.....	Palmyra, N. Y.....	July 29, 1839
Plough, ditching.....	Samuel Thraikill.....	Lafayette, Ind.....	Sept. 10, 1846
Plough, double.....	John Cromwell.....	Roysterstown, Md....	Oct. 23, 1816
Plough, double.....	R. Medley & P. & D. Altenderfer.....	Coolstown, Pa.....	June 11, 1839
Plough, double.....	Albert Peebles.....	Henry co., Ga.....	July 20, 1831
Plough, double shovel.....	John Balthorpe.....	Loudoun co., Va....	Sept. 20, 1819
Ploughs, double.....	Peter Eichar.....	Wooster, Ohio.....	Dec. 5, 1843
Plough, double.....	Aaron Smith.....	Bloomfield, Mich....	May 10, 1844
Plough, drawing machine for....	Luke Johnson.....	Leominster, Mass....	Aug. 6, 1816
Plough, draining.....	Stephen Hall.....	Boston, Mass.....	July 13, 1810
Plough, dressing corn.....	Elisha Bean.....	Massachusetts.....	Mar. 4, 1816
Plough, drill, and cotton thinner.	William Willis.....	Edgefield, S. C.....	May 7, 1832
Plough, excavating ditches.....	James Herbert.....	Lagrange, Ind.....	April 13, 1844
Ploughs, gang of.....	Thomas Wiard.....	East Avon, N. Y....	Nov. 24, 1843
Plough, gathering weeds under the furrow slice.....	Dudley Hills.....	East Hartford, Ct....	Oct. 7, 1844
Plough, harrow.....	Seth Vinton.....	Wilmington, Ct....	Nov. 18, 1807
Plough and harrow.....	Henry Higley.....	Canaan, Ct.....	Dec. 11, 1832
Plough, hill side.....	John Rich, jr.....	Troy, N. Y.....	Feb. 10, 1835
Plough, hill side.....	Norman Staples.....	Pehn's store, Va.....	Nov. 1, 1837
Plough, hill side.....	John P. Cobbs.....	Nelson, co., Va.....	Oct. 1, 1830
Plough, hill side.....	Cyrus H. McCormick	Rockbridge co., Va.	June 13, 1831
Plough, hill side.....	Isaac Teeter.....	Johnstown, Pa.....	Oct. 3, 1836
Plough, hill side.....	Joseph Trump.....	Connellsville, Pa....	Sept. 9, 1845
Plough, hill side.....	James Rorabaugh.....	Luney's creek, Va....	Dec. 3, 1846
Plough, hill side, double.....	Martin Rich.....	Ithaca, N. Y.....	May 24, 1836
Plough, hill side, hinged wing...	William B. Donald.....	Fairfield, Va.....	June 29, 1833
Plough, hill side and horizontal...	John W. Jordan.....	Lexington, Va.....	April 19, 1839
Plough, hill side, (improvement on Teeter's plough).....	Daniel Gochnour, jr..	Conemaugh, Pa.....	June 12, 1840
Plough, hill side, inverting, &c....	John W. Jordan.....	Lexington, Va.....	Oct. 28, 1835
Plough, hill side, reversing.....	Calvin Delano.....	Livermore, Me.....	July 5, 1833
Plough, improvement, attached to the common Gopher.....	Thomas Carter.....	Saurin district, S. C.	Dec. 16, 1823
Plough, improvement on Wood's.	Solomon Austin.....	Sempronius, N. Y....	Feb. 27, 1834
Plough, improvem't on Barnard's.	Peter Hastings.....	Dagsborough, Del....	Dec. 19, 1833
Plough, improvement in guiding..	Ruggles, Nouse, and Mason, ass'ees of J. M. C. Armsby.....	Worcester, Mass....	April 18, 1846
Ploughs, improved mould board for	H. H. May.....	Galesburg, Ill.....	June 27, 1846
Ploughs, improvement in.....	John M. May.....	Philadelphia, Pa....	May 2, 1846
Ploughs, improvement in.....	John M. May.....	Philadelphia, Pa....	May 2, 1846
Plough, improvement in.....	David Anthony, sen..	Union Springs, N. Y.	May 30, 1846
Plough, iron.....	John Boynton.....	South Coventry, Ct.	July 10, 1839
Plough, listing and preparing land	John Weaver.....	Washington, D. C..	May 8, 1823
Plough, manufacturing of.—See Class 14.			
Plough, mould board.....	Robert Smith.....	Pennsylvania.....	May 19, 1890
Plough, mould board, double....	Stephen Gregory.....	Sawpits, N. Y.....	Nov. 14, 1838

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN MADE.
Plough, mould board of.....	S. Witherow & David Pierce.....	Philadelphia, Pa.....	Oct. 5, 1839
Plough, mould board and sheath, &c., attaching by means of rivets	Benjamin F. Jewett...	Springfield, Ill.	Feb. 12, 1841
Plough, polyshare.	Frederick Brewster...	Burlington, Vt.....	Jan. 24, 1835
Plough, prairie, bogging, & ditching.....	John Gordon.....	Copeck, N. Y.....	Jan. 13, 1839
Plough, prairie land.....	Cromwell K. Bartlett...	Geneseo, Ill.	Mar. 28, 1842
Plough, revolving coulter for.....	Howard Delano.....	Mottsville, N. Y.....	April 1, 1842
Plough, ridge.....	Wm. Atwood & Dan'l Hamblet.....	Cornish, N. H.....	Dec. 24, 1833
Plough, right and left.....	George Dozier.....	Fredericktown, Md.	Aug. 20, 1837
Plough, shares and cutters of, constructing and fastening.....	Mahlon Smith.....	Tinicum, Pa.....	Jan. 28, 1846
Plough, self-sharpening.....	Waldron Beach.....	Philadelphia, Pa.....	Aug. 26, 1833
Plough, self-sharpening.....	Waldron Beach.....	Philadelphia, Pa.....	April 9, 1824
Plough, self-sharpening.....	C. & O. Evans.....	Philadelphia, Pa.....	April 14, 1835
Plough, self-sharpening.....	Bancroft Woodcock.....	Mount Pleasant, Pa.	Jan. 26, 1832
Plough, self-sharpening.....	Job B. Norton.....	Utica, N. Y.....	April 27, 1832
Plough, self-sharpening.....	Waldron Beach.....	Philadelphia, Pa.....	Dec. 28, 1832
Plough, self-sharpening.....	Richard B. Chenoweth	Baltimore, Md.....	Mar. 17, 1834
Plough, self-sharpening.....	John Ormiston.....	Centre, Ohio.....	Mar. 17, 1836
Plough, self-sharpening.....	John W. Post.....	Baltimore, Md.....	Oct. 8, 1836
Plough, self-sharpening.....	Isaac Smider.....	Mount Pleasant, Pa.	July 29, 1837
Plough, self-sharpening, horizontal	Cyrus H. McCormick	Rockbridge co., Va.	Nov. 19, 1833
Ploughshare.....	Bailey Carpenter.....	Somersetown, N. Y.	July 1, 1832
Ploughshare, cast iron.....	James H. Concklin.....	Peekskill, N. Y.....	Jan. 13, 1830
Ploughshare, coulter, and mould board.....	William Holt.....	Buffalo, N. Y.....	Aug. 27, 1835
Ploughshare, hardening edges.....	A. L. & E. A. Stephens	Hoboken, N. Y.....	April 23, 1821
Ploughshare, rolled.....	Joseph Potts.....	Montgomery co., Pa.	Nov. 7, 1818
Plough, shifting share.....	John Wood.....	Casleton, N. Y.....	Feb. 1, 1821
Plough, shovel cutter.....	Samuel Wilson.....	Darlington, S. C.....	Feb. 6, 1830
Plough, shovel cutter.....	Robert Walker.....	Washingtonville, Pa.	Mar. 10, 1830
Plough, shovel.....	William C. Pagett.....	Greene, Ohio.....	Oct. 17, 1842
Plough, shovel.....	Moses D. Wells.....	Morgantown, Va.....	May 9, 1846
Plough, triangular.....	Thomas Borden.....	Newport, R. I.....	Jan. 13, 1830
Plough, twin.....	Noble G. Cryer.....	Wentworth, N. C.....	Mar. 24, 1827
Plough, varying the motion.....	John Sanford.....	Sharon, Ct.....	Aug. 20, 1811
Plough, wheel.....	J. C. Ferguson.....	Hydesville, Mass.....	June 22, 1836
Ploughs, wheel.....	Thomas D. Burrall.....	Geneva, N. Y.....	Oct. 28, 1843
Plough, wheel.....	Israel Long.....	Bucyrus, Ohio.....	Mar. 9, 1844
Plough, wheel.....	T. B. Quigley and H. Hall.....	Mansfield, Ohio.....	Oct. 7, 1845
Plough, wire grass & wheel cultivator	Nathan Ide.....	Shelby, N. Y.....	April 18, 1846
Plough, wrought iron.....	J. & H. F. Cromwell...	Cynthiana, Ky.....	Sept. 30, 1841
Potato diggers.....	Archibald C. Ketchum	Schenectady, N. Y.	Feb. 20, 1844
Potatoes, machine for digging.....	Allen Eldred.....	Oppenheim, N. Y.....	July 24, 1846
Pruning shear.....	Simeon Jocelyn.....	New Haven, Ct.....	July 13, 1809
Pulverizer, agricultural.....	Benjamin F. Suckney.	Viatura, Mich. Ter.	Mar. 1, 1834
Rake, collecting apples.....	Elias Hart.....	Berlin, Ct.....	Dec. 31, 1812
Rakes, grain.....	William Gales.....	Barre Centre, N. Y.	Dec. 20, 1843
Rake, grain.....	Benoni F. Partridge...	Onondaga, N. Y.....	Mar. 13, 1844
Rake, grain.....	David Harkness.....	Raisin, Mich.....	Mar. 22, 1846
Rake, hay.....	Thomas C. Hance.....	Palmyra, N. Y.....	June 25, 1821
Rake, hay.....	Daniel Smith.....	Vincennes, Ind.....	June 7, 1838
Rake, hay.....	William Buckminster.	Framingham, Mass.	July 12, 1836
Rake, hay and grain.....	M. & S. Pennock.....	E. Marlborough, Pa.	Feb. 17, 1827
Rake, hay, hand.....	Ambrose Foster.....	Auburn, N. Y.....	Dec. 19, 1827
Rake, hay, horse, revolving.....	Moses Pennock.....	E. Marlborough, Pa.	June 26, 1822
Rake, hay, horse.....	Jeremiah Bailey.....	Philadelphia, Pa.....	Mar. 30, 1827
Rake, hay, revolving.....	Henry & Ezra Hoopes	Wilmington, Del.....	July 26, 1824
Rake, hay and grain harrow.....	George Davis.....	Belmont, Ohio.....	July 22, 1839
Rake, hay and grain, rake teeth for	Hezekiah Haynes....	Middletown, Vt.....	June 18, 1839

* Additional improvement, May 11, 1841. † Ante dated, Aug. 25, 1843. ‡ Reissued Nov. 23, 1824, & Feb. 8, '26.

INVENTIONS OR DISCOVERIES.	PATENTERS.	REFERENCE.	WHEN ISSUED.
Rake, hay, revolving.....	E. B. & M. D. Wells.	Morgantown, Va....	Sept. 20, 1830
Rake, horse.....	Pierson Reading.....	Trenton, N. J.....	Aug. 1, 1818
Rake, horse.....	William Phillips.....	N. Brunswick, N. J.	Aug. 15, 1831
Rake, horse.....	Noah Briggs.....	New Hartford, N. Y.	Feb. 11, 1835
Rake, horse.....	James Pudney.....	Stanford, N. Y.....	Nov. 7, 1835
Rake, horse.....	James W. Webb.....	Mount Morris, N.Y.	Feb. 5, 1836
Rake, horse.....	Erastus S. Root.....	Mount Morris, N.Y.	May 17, 1836
Rake, horse.....	David Dewey.....	Poultney, Vt.....	Nov. 23, 1837
Rakes, horse.....	James Malby.....	North Branford, Ct.	Dec. 5, 1843
Rake, horse or grain.....	Seneca Ladd.....	Danville, Vt.....	Mar. 14, 1846
Rake, horse, (hay).....	L. M. Whitman.....	Pike, N. Y.....	April 4, 1846
Rake, iron tooth.....	Nath'l C. Sanford and Erastus Parmelee.....	Meriden, Ct.....	June 8, 1830
Rake, planting.—See <i>Seeding</i> .			
Rake, revolving horse*.....	Hiram Hunt.....	Bridgewater, Mass...	Dec. 10, 1836
Rake, revolving.....	Stephen Coats.....	Shoreham, Vt.....	April 17, 1837
Rake, revolving ring tooth.....	Hiram S. Doolittle.....	Kortright, N. Y.....	Aug. 22, 1846
Ratton and cane cutters.....	Norbert Lauve.....	Plaquemines, La....	Sept. 17, 1844
Reaping machine.....	Jonathan Read.....	New York.....	Mar. 12, 1843
Rifle, for sharpening scythes.....	Beriah Swift.....	Washington, N. Y.	June 11, 1829
Rifle, for sharpening scythes.....	John Knight.....	Woodbury, N. J....	April 7, 1831
Roller, toothed.....	Isaiah Jennings.....	New York.....	Dec. 27, 1815
Sap bucket.....	Jeremiah Purdy.....	Cherburne, N. Y....	Oct. 4, 1817
Screen.—See <i>Winnowing</i> .			
Scythe.—See <i>Cutting</i> .			
Scythe, the sned.....	George Farquhar.....	Easton, Pa.....	July 12, 1843
Seed clover, cleaning.....	Daniel Hoats.....	Mifflinburg, Pa....	July 20, 1846
Seeding all kinds of seed.....	William Buckminster.	Framingham, Mass...	Oct. 8, 1838
Seeding, corn, covering.....	Thomas Williams.....	Pittsylvania, Va....	Dec. 19, 1822
Seeding, corn, &c.....	P. Smith, and T. H. Arnold.....	Haddam, Ct.....	Jan. 20, 1831
Seeding, corn, &c.....	Henry Todd.....	Pembroke, N. H....	Oct. 1, 1831
Seeding, corn planter.....	Eliakim Spooner.....	Vermont.....	Jan. 25, 1799
Seeding, corn planter.....	John Beecher.....	Lycoming co., Pa...	Mar. 18, 1809
Seeding, corn planter.....	M. & J. Nickols.....	Otsego, N. Y.....	Oct. 12, 1809
Seeding, corn planter.....	John Blocher.....	Lancaster, Pa.....	April 12, 1814
Seeding, corn planter.....	Andrew Cock.....	Flushing, N. Y....	Mar. 20, 1821
Seeding, corn planter.....	Herman Russell.....	Litchfield, Me.....	Jan. 16, 1827
Seeding, corn planter.....	Bird Murphy.....	Union district, S. C.	Dec. 31, 1837
Seeding, corn planter.....	N. Lenox, W. Croft, and H. Pitner.....	Steubenville, Ohio...	Jan. 26, 1829
Seeding, corn planter.....	H. Blair, (colored man)	Glenross, Md.....	Oct. 14, 1834
Seeding, corn planter.....	Thacker C. Bush.....	Clarke co., Ky.....	Dec. 17, 1834
Seeding, corn planter.....	Thomas D. Burrall...	Geneva, N. Y.....	June 26, 1835
Seeding, corn planter.....	Charles R. Belt.....	Washington City, D.C	Jan. 15, 1836
Seeding, corn planter.....	Elisha Bunce.....	Westford, Mass....	July 16, 1838
Seeding, corn planter, and cotton.	John Lobdell.....	Warren co., Miss...	Dec. 26, 1826
Seeding, corn planter, and cotton.	George C. Boyd.....	New London, Pa....	April 11, 1836
Seeding, corn planter, and peas...	Reuben Coffey.....	Burk co., N. C.....	Dec. 14, 1830
Seeding, corn planter, & working.	William Ross.....	Middlebaxton, Pa...	June 24, 1826
Seeding, corn planters.....	Thomas H. Hoskins...	Crawfordsville, Ia...	Jan. 20, 1844
Seeding, cotton planter.....	Christopher Ford.....	Painesville, Va....	May 26, 1825
Seeding, cotton planter.....	Francis H. Smith.....	Richmond, Va.....	Feb. 15, 1826
Seeding, cotton planter.....	J. C. Goodman & W. S. McDonald.....	Wilson co., Tenn...	June 29, 1833
Seeding, cotton planter.....	Michael Beam.....	Buffalo, N. C.....	Feb. 13, 1835
Seeding, cotton planter.....	Jordon Gatlins.....	Murfreesboro', N. C.	June 20, 1835
Seeding, cotton planter.....	Robert T. Goodman...	Ballsville, Va.....	Sept. 18, 1835
Seeding, cotton planter.....	Michael Beam.....	Buffalo, N. C.....	Mar. 30, 1836
Seeding, cotton planter.....	Henry Allen.....	Fayetteville, Tenn...	June 16, 1836
Seeding, cotton planter.....	H. Blair, (colored man)	Glenross, Md.....	Aug. 31, 1836
Seeding, cultivator.....	John Reichard.....	Guilford town'sp, Pa	Dec. 16, 1833
Seeding, grain, sowing.....	Orson Starr.....	Richmond, N. Y....	Aug. 22, 1828
Seeding, grain, sowing.....	William C. Greenleaf.	Andover, Me.....	July 1, 1836

* Additional improvement, Oct. 15, 1836.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Seed, grain, &c., apparatus for drying.....	Wm. W. Alcott.....	Boston, Mass.....	Sept. 26, 1846
Seeding, machine for sowing grain broadcast.....	W. S. Jones & H. C. Smith.....	Fairfield, Ct.....	Feb. 20, 1846
Seeding, machine, for planting seeds.....	James Putnam.....	Hamilton, N. Y.....	Mar. 7, 1846
Seeding, planting corn.....	Niram R. & Orin G. Merchant.....	Guilford, N. Y.....	Oct. 12, 1839
Seeding, planting corn, &c.....	David S. Rockwell.....	New Canaan, Ct.....	Mar. 12, 1839
Seeding, planting corn, &c.....	Samuel W. Cole.....	Chelsea, Mass.....	Aug. 25, 1840
Seeding, planting cotton seed.....	Ezra L. Miller.....	Brooklyn, N. Y.....	April 10, 1841
Seeding, planting machines.....	R. S. Thomas.....	Bennettsville, S. C.....	July 30, 1841
Seeding, planting machines.....	Moses Atwood, jr.....	Hampstead, N. H.....	June 24, 1839
Seeding, planting machines.....	John M. Forrest.....	Princeton Ann c.h., Va.....	June 25, 1839
Seeding, planting machines.....	Martin Nichols.....	Clearfield, Pa.....	Oct. 16, 1840
Seeding, planting machines, &c.....	Joseph Jones.....	Newton, N. J.....	Oct. 11, 1841
Seeding, planting machines.....	Dierck Breur.....	Petersburg, Tenn.....	April 4, 1844
Seeding, planting plough.....	Frederick Woodward.....	New Lisbon, N. Y.....	July 18, 1809
Seeding, planting plough.....	Benjamin Huzzey.....	Jonesborough, Tenn.....	April 1, 1834
Seeding, potatoes, planting.....	George Harper.....	Jenkenstown, Pa.....	Mar. 23, 1818
Seeding, potatoes, planting.....	Levi Rice.....	Robbinstown, Me.....	June 29, 1833
Seeding, potatoes, planting & digging.....	Phineas Meigs & M. C. Arnold.....	Madison, Ct.....	Nov. 3, 1830
Seed planters.....	Gottlieb Mottmiller.....	Columbus, Ohio.....	Sept. 1, 1848
Seed planters.....	Henry Todd.....	Orford, N. Y.....	Dec. 15, 1843
Seeding, seed drill or corn planter.....	Calvin Olds.....	Marlborough, Vt.....	Jan. 20, 1841
Seeding, seed-planters.....	Lorenzo Bachelder.....	Hampstead, N. H.....	April 30, 1840
Seeding, seed-planters.....	Samuel L. Bachelder.....	Haverhill, Mass.....	
Seeding, seed-planters.....	T. J. Lewis & George F. Lewis.....	Boston, Mass.....	June 27, 1840
Seeding, seed-planters.....	T. J. Lewis & George F. Lewis.....	Boston, Mass.....	June 27, 1840
Seeding, seed-planters.....	Joseph Gibbons.....	Adrian, Mich.....	Aug. 25, 1840
Seeding, seed-planters.....	M. Pennock & Sam'l Pennock.....	E. Marlborough, Pa.....	Mar. 12, 1841
Seeding, seed-planting machine.....	George Page.....	Baltimore, Md.....	May 25, 1840
Seeding, seed-planters.....	Wells Kilburn.....	Lawrenceville, Pa.....	June 11, 1842
Seeding, seed-planters.....	Loea Pratt.....	Amherst, N. H.....	April 25, 1844
Seeding, seed-planters.....	Richard J. Galing.....	Murfreesboro', N.C.....	May 10, 1844
Seeding, seed-planters.....	W. Kilburn, and.....	Lawrenceville, Pa.....	Dec. 31, 1844
	F. Haines.....	Marietta, Pa.....	
Seeding, seed, sowing.....	A. & H. Robbins.....	Denmark, N. Y.....	Aug. 28, 1828
Seeding, seed, sowing.....	Zobina Lane.....	Harrisburg, N. Y.....	Sept. 21, 1829
Seeding, seed, sowing, drill for.....	George A. Hoyt.....	Albany, N. Y.....	April 21, 1838
Seeding, sowing and planting rutabaga.....	Hiram R. Merchant.....	Guilford, N. Y.....	Jan. 20, 1838
Seeding, sowing cotton seed.....	L. Miner & L. Felts.....	Yanceyville, N. C.....	July 18, 1840
Seeding, sowing grain, plaster, &c.....	Samuel Hoffer.....	Londonderry, Pa.....	July 17, 1839
Seeding, sowing seed.....	M. & S. L. Seward.....	Guilford, Ct.....	July 27, 1839
Seeding, sowing machines.....	Ezra Fisk.....	Fayette, Me.....	Nov. 8, 1844
Seeding, tilling, and planting, at the same operation, called the cylindrical tiller and planter.....	John Schermerhorn, & Rufus Porter.....	Carroll co., Ia.....	April 10, 1841
		New York, N. Y.....	
Sowing machine.....	Pierpont Seymour.....	E. Bloomfield, N. Y.....	May 7, 1845
Smut machine.....	Thomas Pierce.....	Fishkill, N. Y.....	Feb. 21, 1804
Smut machine.....	Thomas Pierce.....	Fishkill, N. Y.....	May 24, 1805
Smut machine.....	Daniel Tomlinson.....	Brookfield, Ct.....	May 20, 1812
Smut machine.....	Thomas Wilson.....	Baltimore, Md.....	Feb. 8, 1819
Smut machine.....	James Gillaspie.....	Middletown, Md.....	Aug. 23, 1820
Smut machine.....	Daniel Pease, jr.....	Winfield, N. Y.....	Oct. 31, 1820
Smut machine.....	Samuel Pease, jr.....	Winfield, N. Y.....	Feb. 27, 1823
Smut machine.....	Phineas Pettis.....	Talmage, Ohio.....	Aug. 12, 1824
Smut machine.....	L. V. & C. Masten.....	Penn Yan, N. Y.....	April 25, 1826
Smut machine.....	Townshend Carpenter.....	Elmyra, N. Y.....	Dec. 24, 1826

* Additional imp't, July 18, 1842.

† Additional imp't, April 1, 1842.

‡ Additional imp't, May 4, 1841.

INVENTOR OR DISCOVERER.	PATENTEE.	LOCATION.	DATE.
Stout machine.....	Jesse Neale, ass'tee of Phineas Pettis.....	Middleburg, Ohio...	July 2, 1830
Smut machine.....	Jeremiah Case.....	Sodus, N. Y.....	Oct. 1, 1830
Smut machine.....	Levi Hayward.....	Phelps, N. Y.....	April 12, 1831
Smut machine.....	H. Weed & Step. Fel- lows.....	Sandwich, N. H....	Aug. 23, 1831
Smut machine.....	Stephen Fellows.....	Sandwich, N. H....	May 24, 1832
Smut machine.....	Nathaniel Winslow...	Poughkeepsie, N. Y.	Oct. 25, 1832
Smut machine.....	Bartholomew Smith..	Bethlehem, N. Y...	Jan. 9, 1834
Smut machine.....	T. J. Sands & Benja- min Kendig.....	Washington's p., Pa	Mar. 18, 1835
Smut machine.....	John Card.....	Gainesville, N. Y...	June 20, 1835
Smut machine.....	John Turk.....	Columbus, Pa.....	Nov. 7, 1835
Smut machine.....	Edward P. Fitzpatrick	Mount Morris, N. Y.	Nov. 14, 1835
Smut machine.....	Abraham Mudge.....	Canajoharie, N. Y...	Feb. 25, 1836
Smut machine.....	M. B. Spafford.....	Gainesville, N. Y...	Mar. 8, 1836
Smut machine.....	W. B. Ryan.....	Mount Morris, N. Y.	April 28, 1836
Smut machine.....	Robert Engle.....	Burlington co., N. J.	June 2, 1836
Smut machine.....	J. T. Town.....	Mount Morris, N. Y.	June 16, 1836
Smut machine.....	Rufus Dennison.....	Wilton, Maine.....	July 2, 1836
Smut machine.....	Jonas Pratt.....	Ousego, N. Y.....	July 2, 1836
Smut machine.....	Charles D. Childs.....	Mount Morris, N. Y.	Aug. 15, 1837
Smut machine*.....	Benjamin M. Smith..	Rochester, N. Y....	Sept. 8, 1837
Smut machine.....	John Parker.....	Sanbury, Ohio.....	Aug. 23, 1839
Smut machine.....	William C. Grimes...	York, Pa.....	Mar. 25, 1839
Smut machine.....	John B. Yates.....	Sperryville, Va.....	Oct. 12, 1839
Smut machine.....	Leonard Smith.....	Plattsburg, N. Y....	Oct. 18, 1839
Smut machine.....	Luther B. Walker.....	Orangeburg, N. Y....	Oct. 18, 1839
Smut machine.....	Samuel W. Foster.....	Scio, Mich.....	Dec. 21, 1839
Smut machine.....	Jacob Russell.....	Jenner, Pa.....	April 24, 1840
Smut machine.....	Hiram Smith.....	New York.....	July 31, 1840
Smut machine.....	Amos Adams.....	Port Henry, N. Y....	Aug. 3, 1840
Smut machine.....	John Burch.....	Millport, N. Y.....	Aug. 22, 1840
Smut machine.....	William B. Palmer.....	Rochester, N. Y....	April 19, 1841
Smut machine.....	James Coppuck.....	Mount Holly, N. J.	April 24, 1841
Smut machine.....	J. Demuth & B. Bow- man, & Levi Beck...	Lancaster, Pa.... }	May 11, 1841
Smut machine.....	Charles D. Childs...	York, N. Y.....	July 8, 1841
Smut machine.....	Henry A. Buck.....	Fredonia, N. Y....	July 10, 1841
Smut machine.....	T. R. Bailey & Ezra Rich.....	Weybridge, Vt.... }	July 16, 1841
Smut machine.....	Lewis Greene.....	Tiffin, Seneca, Ohio.	Oct. 9, 1841
Smut machine.....	David Baldwin.....	Whitehall, N. Y....	Dec. 14, 1841
Smut machine.....	George D. Waldo.....	Lockport, N. Y....	Jan. 17, 1842
Smut machine.....	John Wilson.....	Genterville, S. C....	June 22, 1842
Smut machine.....	Joseph Heygel.....	Salisbury, Pa.....	Jan. 16, 1843
Smut machine.....	Ralph Summers.....	Seneca Falls, N. Y...	Jan. 27, 1843
Smut machine.....	William Dumout.....	Seneca Falls, N. Y...	Feb. 24, 1843
Smut machine.....	Frederick L. Lee.....	Washington, N. Y....	Mar. 10, 1843
Smut machine.....	Orrin Lull.....	McConnellsville, O.	April 6, 1843
Smut machine.....	Henry Helm.....	Wheeling, Va.....	May 8, 1843
Smut machine.....	Wm. Engle & M. G. Kinney.....	Conyngham, Pa....	May 19, 1843
Smut machine.....	Henry A. Buck.....	Fredonia, N. Y....	May 26, 1843
Smut machine.....	Thomas Bookman...	Lexington dist., S. C	June 3, 1843
Smut machine.....	George Freymoyer...	Chichester, Pa.....	June 24, 1843
Smut machine.....	Thomas Brown.....	Rome, N. Y.....	Aug. 4, 1843
Smut machine.....	Edward Howard.....	Fredonia, N. Y....	Oct. 12, 1843
Smut machine.....	John Coleman.....	Blacklegs, Pa.....	Nov. 15, 1843
Smut machine.....	Meredith Mallory...	Mount Morris, N. Y.	Jan. 20, 1844
Smut machine.....	Jacob W. Brower...	Mount Airy, N. C....	Feb. 28, 1844
Smut machine.....	James M. Clarke.....	Strasburg, Pa.....	Mar. 20, 1844
Smut machine.....	S. Scammon & R. Nason	Waterville, Me.....	April 10, 1844
Smut machine.....	Elisha S. Snyder.....	Charlestown, Va....	April 30, 1844

* Antedated Aug. 1, 1837.

INVENTORS OR DISCOVERERS.	PATENTERS.	PLACES.	DATES.
Smut machine.....	Henry B. James.....	Mount Holly, N. J.	May 17, 1844
Smut machine.....	Abraham Straub.....	Milton, Pa.	May 17, 1844
Smut machine.....	Elisha W. Young and Thomas H. Nelson...	Parkham, Ohio... Harrisburg, Pa...}	June 5, 1844
Smut machine.....	James W. Webster...	Luray, Va.	June 5, 1844
Smut machine.....	John Pagin.....	Michigan City, Ia.	Aug. 14, 1844
Smut machine.....	Jacob Groat.....	Troy, N. Y.	Nov. 9, 1844
Smut machine*.....	Joseph Johnson.....	Wilmington, Del...	Nov. 8, 1845
Smut machine, cleaning grain...	George Mann, jr.....	Lockport, N. Y.	June 29, 1839
Smut machine, cleaning grain...	Thomas McCrea.....	Anna Arundel, Va...	Aug. 9, 1839
Smut machine, cleaning grain...	Samuel Spangler.....	Stony Creek, Pa...	May 19, 1840
Smut machine, cleaning grain, &c. by machinery.....	Edward Bradfield....	Rochester, N. Y....	Sept. 19, 1840
Smut machine, cleaning grain, &c.	Samuel Bentz.....	Boonsboro', Md....	July 23, 1841
Smut machine, cleaning grain...	Jonas Nolt.....	West Hempfield, Pa	Aug. 11, 1841
Smut machine, cleaning grain, &c.	John D. Beers.....	Philadelphia, Pa....	Dec. 10, 1841
Smut machine, cleaning and sepa- rating garlic, &c., from grain...	Joseph Heygel.....	Salisbury, Pa.....	Sept. 25, 1841
Smut machine, cleaning and win- nowing grain.....	Zalmon Rice.....	Lyons, N. Y.....	April 24, 1841
Smut machine, cleaning grain, &c.	Peter Cook.....	Westfield, N. Y....	Jan. 17, 1842
Smut machine, cleaning grain, &c.	J. N. Bird & Edward D. Weld.....	Trenton, N. J.....	Mar. 28, 1842
Smut machine, cleaning grain, &c.	D. Flickinger & Sebas- tian Krim.....	Hanover, Pa.....	May 28, 1842
Smut machine, separating garlic from wheat.....	Samuel Fahrney.....	Boonsborough, Md.	Oct. 26, 1842
Smut and garlic machines.....	William Dulaney.....	Cornwall, N. Y....	Oct. 6, 1843
Smut machine, and garlic.....	Abraham Hurst.....	Allen township, Pa.	Jan. 23, 1835
Smut machine, and garlic.....	Henry Straub.....	Shepherdstown, Va.	Nov. 11, 1837
Smut machine, grain, &c.....	B. Wing & O. Root...	Verona, Ama'n, N.Y	Mar. 12, 1834
Smut machine, or hulling.....	Stephens Cook.....	Marcellus, N. Y....	Aug. 7, 1831
Smut machine, and hulling.....	Samuel Richardson...	Elmira, N. Y.....	Feb. 5, 1836
Smut machine, rubbing garlic from wheat.....	Z. Duvall, A. Callegan, & Jos. Miller.....	Ellicott's Mills, Md.	Nov. 3, 1838
Smut machine, and cleaning rice.	Daniel H. Southworth	Little Falls, N. Y...	Aug. 23, 1838
Smut machine, scouring.....	Frederick Woodward.	Butternuts, N. Y....	Oct. 10, 1821
Smut machine, wheat.....	Ephraim Tisdale....	Warren co., N. Y...	July 31, 1819
Smut machine, cleaning wheat...	Elisha W. & Wm. B. Young.....	Parkman, Ohio.....	July 2, 1839
Smut, wheat rubber.....	James Dunsale.....	Dumfries, Va.....	July 1, 1809
Smut, wheat rubber.....	John D. Richards....	Middleburg, Va....	Feb. 27, 1812
Smut, wheat rubber.....	David Narracong....	Skaneateles, N. Y...	Aug. 18, 1831
Smut, wheat rubber.....	Samuel, Nath'l H., & Wm. Ellicott.....	Ellicott's Mills, Md.	July 31, 1833
Strainers for milk pails.....	Isaiah Bunnell.....	Derby, Ct.....	Aug. 18, 1837
Straw cutter.....	M. Coates & E. Evans	Philadelphia, Pa...	April 30, 1804
Straw cutter.....	John Heaven.....	Montgomery co., Va	April 17, 1806
Straw cutter.....	Josiah Cleveland....	Franklin co., Pa...	July 18, 1807
Straw cutter.....	Benjamin Conner....	Portsmouth, N. H.	July 20, 1807
Straw cutter.....	Elihu Hotchkiss.....	Brattleboro', Vt...	Aug. 2, 1808
Straw cutter.....	Roger Haskill.....	Burlington, N. Y...	May 25, 1809
Straw cutter.....	Richard Canfield....	Morristown, N. J...	June 25, 1809
Straw cutter.....	Elihu Hotchkiss.....	Brattleboro', Vt...	Jan. 18, 1817
Straw cutter.....	Samuel Whitlock....	Vermont.....	Mar. 3, 1817
Straw cutter.....	W. Ayres & H. Gay.	Windsor, Vt.....	Aug. 13, 1817
Straw cutter.....	A. Brayton and H. C. Green.....	Cheshire, Mass....	Dec. 5, 1817
Straw cutter.....	Alpheus Bigelow....	Weston, Mass.....	Feb. 13, 1818
Straw cutter.....	Stephen A. Sherwood.	Poughkeepsie, N. Y.	April 11, 1818
Straw cutter.....	Giles Dayton.....	Springfield, Mass...	Mar. 18, 1819
Straw cutter.....	Lemuel Greene.....	Greene co., Ga....	Dec. 21, 1819
Straw cutter.....	Jona'n S. Eastman...	Baltimore, Md....	Jan. 29, 1822
Straw cutter.....	William Willis.....	South Carolina....	Aug. 24, 1822

* Antedated Sept. 9, 1845.

† Additional improvement, Aug. 12, 1841.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN GRANTED.
Straw cutter.....	John Orsborn.....	Blanford, Mass.....	Dec. 6, 1832
Straw cutter.....	John J. Steel.....	Richmond co., N. C.....	May 24, 1834
Straw cutter.....	Titus Preston.....	Wallingford, Ct.....	Oct. 1, 1839
Straw cutter.....	Samuel Wilson.....	Darlington c. h., S. C.....	Nov. 11, 1839
Straw cutter.....	Benjamin R. Greene.....	Warwick, R. I.....	Aug. 8, 1839
Straw cutter.....	Joshua Davis.....	Marysville, Va.....	Aug. 19, 1833
Straw cutter.....	Jonathan Howlet.....	Greensboro', N. C.....	Sept. 7, 1833
Straw cutter.....	Isaac Lewis.....	Knoxville, Tenn.....	Sept. 12, 1833
Straw cutter.....	William Mitchell.....	Abbeville dist'ct, S. C.....	Nov. 19, 1839
Straw cutter.....	John Shaw.....	Philadelphia, Pa.....	Nov. 19, 1833
Straw cutter.....	James Secor.....	Bristol, Pa.....	Dec. 16, 1833
Straw cutter.....	John M. Tilford.....	Rutherford co., N. C.....	Dec. 31, 1833
Straw cutter.....	Nimrod Murphree.....	Nashville, Tenn.....	Sept. 17, 1834
Straw cutter.....	Stephen Ustick.....	Philadelphia, Pa.....	Oct. 3, 1834
Straw cutter.....	Joshua Moore.....	Roane county, Tenn.....	Dec. 23, 1834
Straw cutter.....	Nimrod Murphree.....	Nashville, Tenn.....	Jan. 21, 1836
Straw cutter.....	Stephen Ustick.....	Philadelphia, Pa.....	Feb. 5, 1835
Straw cutter.....	John Deakyn.....	Petersburg, Va.....	April 2, 1835
Straw cutter.....	John W. Cope.....	Franklin co., Tenn.....	April 22, 1835
Straw cutter.....	Stephen Ustick.....	Philadelphia, Pa.....	May 29, 1835
Straw cutter.....	James McMath.....	Crawford, Pa.....	June 26, 1835
Straw cutter.....	Ernst G. Augustin.....	New York.....	July 6, 1835
Straw cutter.....	Isaac S. Wright.....	Elbridge, N. Y.....	Feb. 3, 1836
Straw cutter.....	C. D. Skinner and D. Read.....	Haddam, Ct.....	Feb. 10, 1836
Straw cutter.....	Joseph Everett.....	Geneva, N. Y.....	Feb. 10, 1836
Straw cutter.....	James M. Wolfolk.....	Oldham county, Ky.....	Feb. 21, 1836
Straw cutter.....	James Hyde.....	Darien, N. Y.....	Feb. 23, 1836
Straw cutter.....	E. Tarbox and C. F. Kneeland.....	Ogden, N. Y.....	June 22, 1836
Straw cutter.....	Jonathan S. Eastman.....	Baltimore, Md.....	Feb. 15, 1836
Straw cutter.....	William J. Duvall.....	Baltimore, Md.....	Mar. 28, 1836
Straw cutting.....	Ashman Hall.....	Kent, N. Y.....	Nov. 7, 1836
Straw cutting.....	Henry Silliman.....	Perry village, N. Y.....	Mar. 30, 1837
Straw cutting.....	Edwin Gillett.....	Ellington, Ct.....	Jan. 9, 1838
Straw cutting.....	Ebenezer Dewey.....	Butternuts, N. Y.....	June 4, 1838
Straw cutting.....	Samuel Gilson.....	Arcadia, N. Y.....	June 27, 1838
Straw cutting.....	John Boynton.....	South Coventry, Ct.....	Nov. 25, 1838
Straw cutting box.....	William Willis.....	South Carolina.....	Aug. 24, 1832
Straw cutting box.....	Mallory M. Marshall.....	Smithfield, Va.....	July 1, 1836
Straw, cutting cabbage, paper, &c.....	Henry C. Jones.....	Salem t'nship, Ohio.....	Nov. 7, 1835
Straw, cutting, and corn sheller.....	William Denson.....	Morgan county, Ala.....	May 2, 1835
Straw, cutting, and fodder.....	William A. Hamilton.....	Albany, N. Y.....	Nov. 19, 1833
Straw, cutting, and fodder.....	A. Russell & N. Davis.....	Syracuse, N. Y.....	Nov. 19, 1833
Straw, cutting, and fodder.....	Ethel H. Porter.....	Lincolnton, S. C.....	Mar. 14, 1834
Straw, cutting hay, &c.....	James Luckey.....	New York.....	Mar. 9, 1833
Straw, cutting hay, &c.....	Joseph S. Bishop.....	Wayne, Maine.....	Mar. 12, 1834
Straw, cutting hay, &c.....	Barnabas Devee.....	Leeds, Maine.....	June 17, 1834
Straw, cutting hay, &c.....	James Luckey.....	New York.....	Dec. 16, 1833
Straw, cutting hay, &c., horizontal.....	Paul Moody.....	Philadelphia, Pa.....	July 8, 1834
Straw cutter, horizontal.....	Robert A. B. Beach.....	Williamson co., Tenn.....	April 24, 1836
Straw, cutting hay, stalks, &c.....	Jacob Harland.....	Tomkinsville, Ky.....	April 19, 1832
Straw, cutting machine.....	Major McDonald.....	Topsham, Mass.....	June 10, 1824
Straw, cutting machine.....	Noah Safford.....	Springfield, Vt.....	Aug. 25, 1824
Straw, cutting machine.....	B. A. Hall and Chaun. Hall.....	Middletown, Ct.....	Nov. 7, 1825
Straw, cutting machine.....	Thomas Benbow.....	Guilford co., N. C.....	Feb. 6, 1827
Straw, cutting machine.....	Laban Durham and J. S. Pleasants.....	Halifax county, Va.....	July 27, 1827
Straw, cutting machine.....	Warren Cummings.....	Livingston co., N. Y.....	Feb. 11, 1828
Straw, cutting machine, and corn sheller.....	Calvin Chamberlain.....	Armenia, N. Y.....	Mar. 15, 1827
Straw, cutting machine, and thrashing grain.....	Levi Rice.....	Lockport, N. Y.....	April 1, 1829

* Improvements on Patent, March 9, 1833.

INVENTOR OR DISCOVERER.	PATENTED.	APPROVED.	WHEN ISSUED.
Straw cutter [*]	Charles T. Botts.....	Richmond, Va.....	Mar. 15, 1889
Straw cutter.....	Thomas Hopper.....	N. Brunswick, N. J.....	Mar. 15, 1890
Straw cutter.....	Willis Grantham.....	Marshall's Ferry, Te.....	June 18, 1893
Straw cutter.....	William A. Staples.....	Lynchburg, Va.....	Nov. 16, 1893
Straw cutter.....	Joseph Worley.....	Hawkins co., Tenn.....	June 20, 1840
Straw cutter.....	John B. King.....	Athens, Tenn.....	May 15, 1841
Straw cutters.....	Joseph W. Webb.....	Mount Morris, N. J.....	July 2, 1843
Straw cutters.....	Edmund Warren.....	New York.....	Oct. 7, 1843
Straw cutter.....	Cornelius Merry.....	Ithaca, N. Y.....	Jan. 27, 1843
Straw cutter.....	Charles T. Botts.....	Richmond, Va.....	March 4, 1843
Straw cutter.....	John M. Thatcher.....	Milton, Pa.....	March 4, 1843
Straw cutter.....	Israel J. Richardson.....	New York, N. Y.....	April 10, 1843
Straw cutter.....	John C. Concklin.....	Peekskill, N. Y.....	May 2, 1843
Straw cutter.....	John K. Landis.....	East Hempfield, Pa.....	Aug. 26, 1843
Straw cutter.....	James P. Ross.....	Lewisburg, Pa.....	Sept. 1, 1843
Straw cutter †.....	James Sanford.....	Redding, Ct.....	Oct. 12, 1843
Straw cutter.....	Charles S. Gaylord.....	Gaylord's Bridge, Ct.....	Nov. 6, 1843
Straw cutter.....	A. A. Hall.....	Croton, N. Y.....	Dec. 4, 1843
Straw cutter.....	William Hovey.....	Worcester, Mass.....	Feb. 12, 1844
Straw cutter.....	Hiram M. Smith.....	Richmond, Va.....	Feb. 20, 1844
Straw cutter.....	Eliakim Taylor.....	Rochester, N. Y.....	Oct. 12, 1844
Straw cutter.....	Ezra Taylor.....	Monroe, N. Y.....	Nov. 6, 1844
Straw cutter.....	Daniel M. Sechler.....	Wooster, Ohio.....	Feb. 20, 1845
Straw cutter.....	Grey Udey.....	Chapel Hill, N. C.....	Sept. 27, 1845
Straw cutter.....	Samuel G. Blackman.....	Norwalk, Ct.....	Feb. 10, 1846
Straw cutter.....	J. W. Webb.....	Lockport, N. Y.....	Feb. 10, 1846
Straw cutter.....	Joseph C. Rich.....	Penfield, N. Y.....	Jan. 7, 1846
Straw cutter.....	Israel J. Richardson.....	New York, N. Y.....	Feb. 10, 1846
Straw cutter.....	G. Catchpole.....	Geneva, N. Y.....	Sept. 5, 1846
Straw cutter.....	Isaac Mayfield.....	Elkton, Ky.....	Sept. 19, 1846
Straw cutter.....	James T. Wade.....	Augusta, Ga.....	Oct. 3, 1846
Straw cutter.....	W. J. Rylander.....	Columbus, Ga.....	Oct. 3, 1846
Straw cutter, feeding and pressing the straw.....	Israel W. Groff.....	Lampeter, Pa.....	April 30, 1846
Stump extractor.....	J. R. Remington.....	Lowndes co., Ala.....	Sept. 3, 1840
Thrashing and breaking flax and hemp.....	Gideon Reynolds.....	New York.....	July 20, 1824
Thrashing and breaking flax, &c.....	J. A. Heermance.....	Red Hook, N. Y.....	Jan. 16, 1836
Thrashing and breaking flax, &c.....	D. Hurlbut, N. Etho- ridge, & J. A. Combs	Herkimer, N. Y.....	Feb. 21, 1836
Thrashing and breaking flax.....	Peter Barker.....	Worthington, Ohio.....	Aug. 20, 1827
Thrashing and cleaning clover seed	William Morgridge.....	Chester ville, Maine.....	Feb. 12, 1834
Thrashing and cleaning clover seed	Samuel Raub, jr.....	Wilkesbarre, Pa.....	Mar. 10, 1834
Thrashing and cleaning clover seed	John Goodyear.....	South Middleto'n, Pa.....	June 2, 1836
Thrashing and cleaning from smut	Henry Spencer.....	Maryland, N. Y.....	Nov. 7, 1831
Thrashing and cleaning grain.....	Simon Willard, jr.....	Hudson, N. Y.....	Nov. 30, 1807
Thrashing and cleaning grain.....	Joseph Coppinger.....	Baltimore, Md.....	Oct. 31, 1809
Thrashing and cleaning grain.....	Abel Dinsmoore.....	Le Roy, N. Y.....	July 29, 1815
Thrashing and cleaning grain.....	N. Mills and J. Rogers	Bath, N. H.....	Jan. 14, 1823
Thrashing and cleaning grain.....	Benjamin Lovejoy.....	Augusta, N. Y.....	Dec. 31, 1823
Thrashing and cleaning grain.....	Alexander Porter.....	New Vineyard, Me.....	Jan. 23, 1825
Thrashing and cleaning machine.....	Joseph Comfort.....	Bucks county, Pa.....	Jan. 25, 1810
Thrashing and cleaning machine.....	James Hyde.....	S. Pembroke, N. Y.....	Feb. 8, 1825
Thrashing and cleaning machine.....	Archibald Douglass.....	Marcellus, N. Y.....	Sept. 8, 1826
Thrashing and cleaning rice.....	Michael Morrison.....	Waterbury, Ct.....	Sept. 15, 1821
Thrashing and cleaning wheat.....	Ezra Miller.....	New York.....	July 19, 1802
Thrashing and cleaning wheat.....	James Gregg.....	Londonderry, N. H.....	Mar. 30, 1821
Thrashing and cleaning wheat, &c.....	Samuel Lane.....	Hallowell, Maine.....	April 6, 1831
Thrashing and cleaning wheat, and bolting.....	Lafayette Tibbits.....	New Glasgow, Va.....	Oct. 22, 1831
Thrashing clover seed.....	William Loomis.....	Ashford, Ct.....	July 2, 1836
Thrashing clover seed.....	William B. Davis.....	Reading, Ohio.....	June 20, 1838
Thrashing clover seed.....	William Rowe.....	Frederick, Md.....	Aug. 25, 1838
Thrashing and clover seed machine	Stacy West.....	Harford county, Md.....	March 1, 1833

* Additional improvements, Oct. 15th, 1839. Oct. 13th, 1842.

† Antedated June 1, 1843.

MEANS OR DISCOVERIES.	PATENTERS.	REFERENCES.	WITNESSED.
Thrashing & corn shelling machine	David Kneuer.....	E. Nantmeal town- ship, Pa.....	Sept. 25, 1834
Thrashing and cutting.....	Daniel Youngs.....	Piermont, N. H.....	April 17, 1812
Thrashing cylinder, and concave.	William E. Osborne.....	Brighton, N. Y.....	April 30, 1832
Thrashing cylinder, and concave.	James Hart and Wal- ter Holladay.....	Spottsylvania co., Va.....	Sept. 17, 1833
Thrashing and dressing flax.....	Stephen J. Gold.....	Cornwall, Ct.....	Jan. 11, 1832
Thrashing, fanning, and cleaning grain.....	Esra Miller and John Andrews.....	Westmoreland, N. Y.....	Aug. 15, 1810
Thrashing and fanning machine..	Elihu Hotchkiss.....	Brattleborough, Vt.....	Aug. 8, 1816
Thrashing and flax breaker.....	David W. Webster....	Amesbury, Mass.....	Feb. 9, 1828
Thrashing & flax dressing machine	Samuel Condon.....	New Hartford, Ct.....	March 3, 1809
Thrashing grain.....	John Brown.....	Jackson, Tenn.....	Oct. 21, 1834
Thrashing grain.....	John and D. Fitzgerald	New York.....	Oct. 30, 1834
Thrashing grain.....	John Blue.....	Covert, N. Y.....	Mar. 14, 1846
Thrashing grain.....	Stacy West.....	Harford county, Md.....	Nov. 11, 1834
Thrashing grain.....	John Gearheart.....	Rush township, Pa.....	Aug. 27, 1835
Thrashing grain.....	L. Yale, S. W. Stimson, and N. Sumner.....	Little Falls, N. Y.....	May 17, 1838
Thrashing grain, and breaking flax	Amoni West.....	Greene, Maine.....	July 26, 1839
Thrashing machine.—See Class 9,	A. and N. Reminton..	Genoa, N. Y.....	May 19, 1825
Thrashing grain, and cleaning flax	Breaking Stone. John Carll.....	New York.....	Feb. 12, 1823
Thrashing grain, hulling, &c.....	Hor. W. Waterhouse	Butler county, Ky.....	Mar. 21, 1833
Thrashing grain, and hulling clover seed	Joseph Darah and Ja- cob Kinsey	Cookstown and Ras- comb Manor, Pa.....	Nov. 6, 1830
Thrashing grain, and hulling clover seed	Lenmon Cooley.....	Philadelphia, Pa.....	Nov. 11, 1830
Thrashing grain, and shelling corn	Pierson Reading.....	Trenton, N. J.....	May 20, 1825
Thrashing grain, and shelling corn	Benjamin D. Beecher.	Woodbury, Conn.....	Oct. 20, 1830
Thrashing grain, and shelling corn	Edward Thurston....	New York.....	Nov. 1, 1830
Thrashing grain, and shelling corn	Myron J. Gilbert.....	Troy, N. Y.....	Jan. 20, 1838
Thrashing and grinding grain....	William S. Lewis.....	Pittsylvania, Va.....	Oct. 20, 1822
Thrashing and hulling clover seed	Joseph Potter.....	Reading, Pa.....	Feb. 18, 1826
Thrashing and hulling clover seed	Chester Clarke.....	Colebrookdale, Pa.....	Jan. 28, 1830
Thrashing and hulling clover seed	James Parsons, jr.....	Rush, Pa.....	June 29, 1833
Thrashing and hulling clover seed	Jonathn Brooks.....	Brownburg, Va.....	Dec. 15, 1837
Thrashing and hulling clover seed, and grinding corn.	Oliver Dean, jr., and Joseph Woodhull..	Caledonia, N. Y.....	April 25, 1831
Thrashing and hulling grass seed.	Samuel Gould.....	New Portland, Me.....	Aug. 15, 1835
Thrashing, hulling, and shelling..	Jesse S. Dick.....	Genesee co., N. Y.....	Mar. 13, 1835
Thrashing machine.....	Samuel Mulliken.....	Philadelphia, Pa.....	Mar. 11, 1791
Thrashing machine.....	William Thompson..	Richmond, Va.....	Aug. 2, 1791
Thrashing machine.....	William Hodgeon....	Virginia.....	April 28, 1794
Thrashing machine.....	James Wardrop.....	Amthill, Va.....	Nov. 5, 1794
Thrashing machine.....	William Booker.....	Virginia.....	Mar. 11, 1797
Thrashing machine.....	Richard R. Elliott....	Massachusetts.....	Nov. 16, 1797
Thrashing machine.....	Thomas C. Martin.....	Massachusetts.....	June 2, 1798
Thrashing machine.....	Christopher Hoxie....	New York.....	Aug. 20, 1801
Thrashing machine.....	Joseph Pope.....	Massachusetts.....	July 22, 1802
Thrashing machine.....	Jedediah P. Turner... Thomas Barnett.....	Delaware.....	Oct. 19, 1803
Thrashing machine.....	James Deneale.....	Philadelphia, Pa.....	Feb. 21, 1804
Thrashing machine.....	Benjamin B. Bernard.	Dumfries, Va.....	Nov. 20, 1804
Thrashing machine.....	Randal Wallis.....	Virginia.....	Nov. 30, 1807
Thrashing machine.....	Robert Patten.....	Baltimore, Md.....	Nov. 9, 1808
Thrashing machine.....	Joseph Comfort.....	Columbia, Pa.....	Feb. 17, 1809
Thrashing machine.....	Joseph Beach.....	Bucks county, Pa.....	Jan. 25, 1810
Thrashing machine.....	Isaiah Jennings.....	Northfield, Mass.....	Mar. 30, 1810
Thrashing machine.....	Daniel C. Arnold.....	Brookfield, N. Y.....	Mar. 30, 1810
Thrashing machine.....	James W. Walker.....	Dec. 15, 1810	
Thrashing machine.....	R. C. Van Houten....	Wilmington, N. C.....	Feb. 9, 1811
Thrashing machine.....	Benjamin S. Hort.....	New York.....	Mar. 28, 1811
Thrashing machine.....	William Richards.....	Georgetown, S. C.....	Feb. 21, 1812
Thrashing machine.....		Culpepper co., Va.....	March 2, 1812

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	DATE.
Thrashing machine.....	Joseph Goulding.....	Bangor, Mass.....	Mar. 19, 1836
Thrashing machine.....	J. Judson and J. Hotchkiss.....	Woodbury, Conn.....	Nov. 27, 1812
Thrashing machine.....	Samuel Skiff.....	Sharon, Conn.....	Dec. 5, 1812
Thrashing machine.....	John Houpt.....	Bucks county, Pa.....	Dec. 14, 1812
Thrashing machine.....	Thomas Warner.....	Genesee, N. Y.....	May 11, 1815
Thrashing machine.....	Nathan Read.....	Boston, Mass.....	Feb. 22, 1817
Thrashing machine.....	Thomas Cohoon and William Elliot.....	Washington, D. C.....	April 12, 1817
Thrashing machine.....	Silas Smith.....	Albany, N. Y.....	Aug. 23, 1817
Thrashing machine.....	Nathan Read.....	Belfast, Maine.....	Dec. 23, 1817
Thrashing machine.....	John Hersey.....	Matthews co., Va.....	Feb. 9, 1818
Thrashing machine.....	Nathan Read.....	Belfast, Maine.....	Feb. 18, 1818
Thrashing machine.....	Thomas Beatty and Michael Shanks.....	Washington, D. C.....	Feb. 25, 1818
Thrashing machine.....	James Jones, jr.....	New Haven, Conn.....	Feb. 25, 1818
Thrashing machine.....	James and Jos. Gregg.....	Londonderry, N. H.....	May 28, 1818
Thrashing machine.....	C. Bullard, J. Gray, and Ira Draper.....	Norfolk co., Mass.....	Dec. 16, 1818
Thrashing machine.....	Thomas Mayfield.....	Baltimore, Md.....	Dec. 28, 1818
Thrashing machine.....	William H. Ransome.....	Matthews co., Va.....	Sept. 8, 1819
Thrashing machine.....	Ezra Goodell.....	Phelps, N. Y.....	June 6, 1820
Thrashing machine.....	Asa Shattuck.....	Pepperhill, Mass.....	Aug. 23, 1820
Thrashing machine.....	Benjamin Cummings.....	Brooklyn, N. H.....	Sept. 1, 1821
Thrashing machine.....	Alvin Savage.....	Wheatland, N. Y.....	Mar. 28, 1822
Thrashing machine.....	B. and J. Tyler and J. B. Andrews.....	Windsor, Vt.....	April 23, 1822
Thrashing machine.....	R. Gillman.....	New York.....	April 29, 1822
Thrashing machine.....	Major McDonald.....	Topsham, Maine.....	July 9, 1822
Thrashing machine.....	Joseph Pope.....	Hallowell, Maine.....	July 30, 1822
Thrashing machine.....	Timothy Howe.....	Turner, Maine.....	Dec. 3, 1822
Thrashing machine.....	Gideon Reynolds.....	New York.....	Jan. 21, 1823
Thrashing machine.....	Pierson Reading.....	Trenton, N. J.....	April 15, 1823
Thrashing machine.....	Joseph R. Miller.....	Dryden, New York.....	April 26, 1823
Thrashing machine.....	William Kirk.....	Baltimore, Md.....	July 22, 1823
Thrashing machine.....	Charles Smith.....	New York.....	Sept. 6, 1823
Thrashing machine.....	Archibald Douglass.....	Marcellus, N. Y.....	Sept. 18, 1823
Thrashing machine.....	Andrew Noble.....	Alfred, Maine.....	Jan. 12, 1824
Thrashing machine.....	Richard Holden.....	Philadelphia, Pa.....	May 20, 1825
Thrashing machine.....	William Hoyt.....	Brookville, Ind.....	Sept. 9, 1826
Thrashing machine.....	William Small.....	Augusta, Maine.....	Sept. 9, 1826
Thrashing machine.....	William Small.....	Augusta, Maine.....	Jan. 10, 1826
Thrashing machine.....	John Shaw.....	Kennebec, Maine.....	May 10, 1826
Thrashing machine.....	Seth Ballou.....	Livermore, Maine.....	May 25, 1826
Thrashing machine.....	Pierson Reading.....	Trenton, N. J.....	June 3, 1826
Thrashing machine.....	James Hyde.....	Pembroke, N. Y.....	Dec. 9, 1826
Thrashing machine.....	Ed. B. Pike.....	Litchfield, Maine.....	Oct. 5, 1827
Thrashing machine.....	Elias B. Hort.....	Charleston, S. C.....	Feb. 18, 1828
Thrashing machine.....	Michael First.....	Uniontown, Md.....	March 3, 1828
Thrashing machine.....	William Loomis.....	Springfield, N. Y.....	March 6, 1828
Thrashing machine.....	John H. Bennett.....	Aurelius, N. Y.....	April 10, 1828
Thrashing machine.....	Calvin Emmons.....	New York.....	April 17, 1828
Thrashing machine.....	Norton Case.....	North Granville, O.....	May 23, 1828
Thrashing machine.....	Samson Felton.....	Killbuck, Ohio.....	July 22, 1828
Thrashing machine.....	Matthew Barney.....	Nantucket, Mass.....	Aug. 5, 1828
Thrashing machine.....	Samuel S. Allen.....	Skaneateles, N. Y.....	Nov. 1, 1828
Thrashing machine.....	James S. Wood.....	Boutetourt co., Va.....	Jan. 9, 1829
Thrashing machine.....	George Fuller.....	Gardiner, Maine.....	June 11, 1829
Thrashing machine.....	Calvin Emmons.....	New York.....	July 27, 1829
Thrashing machine.....	Enoch Harmon.....	Upper Wakefield, Pa.....	Aug. 5, 1829
Thrashing machine.....	James S. Wood.....	Pattensburg, Va.....	Sept. 10, 1829
Thrashing machine.....	Thomas G. Owen.....	Baltimore, Md.....	Nov. 26, 1829
Thrashing machine.....	William Barnes.....	Brookhaven, N. Y.....	Dec. 14, 1829
Thrashing machine.....	John Haws.....	Hudson, N. Y.....	Dec. 31, 1829

* Reissued May 13, 1836.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Thrashing machine.....	Jas. Clark and I. Starks	Genoa, N. Y.....	Jan. 29, 1830
Thrashing machine.....	Henry C. Atwood....	Woodbury, Conn...	Jan. 23, 1830
Thrashing machine.....	Edmund Warren.....	New York.....	Jan. 29, 1830
Thrashing machine.....	Joel Dewey, jr.....	Troy, N. Y.....	Jan. 29, 1830
Thrashing machine.....	Daniel Moyer.....	Cootstown, Pa.....	Feb. 10, 1830
Thrashing machine.....	Rudolph Miller.....	Marietta, Pa.....	Mar. 15, 1830
Thrashing machine.....	Thomas Ingersoll....	Murray, N. Y.....	Mar. 23, 1830
Thrashing machine.....	William Corwith.....	New York.....	Mar. 23, 1830
Thrashing machine.....	William C. Ross.....	Pennfield, N. Y.....	April 1, 1830
Thrashing machine.....	James Cooper.....	Augusta county, Va.	April 12, 1830
Thrashing machine.....	Noah Lindsey.....	Catskill, N. Y.....	May 7, 1830
Thrashing machine.....	James Douglass and Walter Johnson....	Attica, N. Y.....	May 14, 1830
Thrashing machine.....	Samuel Fisher and Da- vid Sperry.....	Amsterdam, Va....	May 19, 1830
Thrashing machine.....	David Plagg, jr.....	Gardiner, Maine....	June 4, 1830
Thrashing machine.....	John Peters.....	Harrisburg, Pa.....	June 12, 1830
Thrashing machine.....	Squire Gambell.....	Onondaga, N. Y....	June 24, 1830
Thrashing machine.....	Asher Slover and Wil- liam Sperry.....	New York.....	June 29, 1830
Thrashing machine.....	James H. Arnold and J. Bondsall.....	Morristown, Ohio...	July 8, 1830
Thrashing machine.....	David Flagg, jr.....	New York.....	July 10, 1830
Thrashing machine.....	John Stowitts.....	Gorham, N. Y.....	July 13, 1830
Thrashing machine.....	A. Lupton, J. Janney, and John Lupton...	Frederick co., Va...	July 26, 1830
Thrashing machine.....	R. L. Caustin.....	Ledyard, N. Y.....	Oct. 1, 1830
Thrashing machine.....	William Ottinger.....	Whitemarsh, Pa....	Oct. 1, 1830
Thrashing machine.....	William J. Wood.....	Batavia, N. Y.....	Oct. 1, 1830
Thrashing machine.....	William Sperry.....	New York.....	Oct. 1, 1830
Thrashing machine.....	Alonzo L. Smith.....	Brutus, N. Y.....	Nov. 24, 1830
Thrashing machine.....	Samuel Turner and Norris Barnes....	Aurelius, N. Y.....	Nov. 27, 1830
Thrashing machine.....	Rufus Humphrey....	Victor, N. Y.....	Dec. 27, 1830
Thrashing machine.....	Isaac Norton.....	Schuylersville, N. Y.	Jan. 6, 1831
Thrashing machine.....	Samuel Turner.....	Aurelius, N. Y.....	Jan. 11, 1831
Thrashing machine.....	William Emmons....	New York.....	Feb. 7, 1831
Thrashing machine.....	Truman Fox and W. G. Borland.....	Little Falls, N. Y...	Feb. 8, 1831
Thrashing machine.....	John Harmon, jr....	Upper Wakefield, Pa.	Feb. 11, 1831
Thrashing machine.....	Joseph C. Gentry....	Philadelphia, Pa....	March 7, 1831
Thrashing machine.....	Fayette Cross.....	Sweden, N. Y.....	March 8, 1831
Thrashing machine.....	Gideon Cande and Jo- seph Toucey.....	Rochester, N. Y....	April 1, 1831
Thrashing machine.....	William B. Marks....	Petersburg, Va.....	April 8, 1831
Thrashing machine.....	Newton C. Monroe....	Windham, N. Y.....	April 14, 1831
Thrashing machine.....	William J. Wood.....	Rochester, N. Y....	April 19, 1831
Thrashing machine.....	Andrew Richison....	New Carlisle, Ohio..	April 22, 1831
Thrashing machine.....	Joshua S. West.....	Portland, N. Y.....	April 26, 1831
Thrashing machine.....	Edmund Warren.....	New York.....	April 28, 1831
Thrashing machine.....	Samuel Fahrney.....	Boonsborough, Md...	May 9, 1831
Thrashing machine.....	Rinaldo P. Gillett...	Victor, N. Y.....	June 13, 1831
Thrashing machine.....	Isaac Van Doren.....	Hopewell's Gap, N.J.	June 13, 1831
Thrashing machine.....	John Vosburg.....	Kinderhook, N. Y....	July 20, 1831
Thrashing machine.....	Ira Crawford.....	Sweden, N. Y.....	July 20, 1831
Thrashing machine.....	Phillip Harrington...	Petersburg, Va.....	July 20, 1831
Thrashing machine.....	Junius P. Palmer.....	Baltimore, Md.....	July 20, 1831
Thrashing machine.....	Benjamin Balch and Luke Webster.....	Sweden, N. Y.....	July 22, 1831
Thrashing machine.....	Jacob Redifer.....	Philadelphia, Pa....	July 25, 1831
Thrashing machine.....	Benjamin Maltby.....	Gates, N. Y.....	July 30, 1831
Thrashing machine.....	Thomas Carpenter, 2d	Elmyra, N. Y.....	Sept. 28, 1831
Thrashing machine.....	Ezra Wickmire.....	Alexander, N. Y....	Sept. 28, 1831
Thrashing machine.....	William Prescott....	Pottsville, Pa.....	Oct. 25, 1831

INVENTORS OR DISCOVERERS.	PATENTERS.	LOCATIONS.	DATE ISSUED.
Thrashing machine.....	Eben. Gordon and D. T. Gordon.....	Oswego county, N.Y.	Oct. 27, 1831
Thrashing machine.....	Johnson Dawkins.....	Westport, Ky.....	Nov. 10, 1831
Thrashing machine.....	Philip Shaffer.....	Richmond t'n'sp, Pa.	Nov. 16, 1831
Thrashing machine.....	Waldren Beach.....	Philadelphia, Pa.....	Nov. 23, 1831
Thrashing machine.....	Orlando Hurd.....	Bridgeport, Conn.....	Jan. 31, 1832
Thrashing machine.....	Nathaniel Adams.....	Westmoreland, N.Y.	March 2, 1832
Thrashing machine.....	Hardin Branch.....	New York.....	April 18, 1832
Thrashing machine.....	Samuel Kable.....	Beaver Creek town- ship, Ohio.....	May 10, 1832
Thrashing machine.....	M. L. Flagler.....	New York.....	July 7, 1832
Thrashing machine.....	Squire Gambell.....	Onondaga, N. Y.....	Oct. 25, 1832
Thrashing machine.....	John R. Wheeler.....	Brighton, N. Y.....	April 9, 1833
Thrashing machine.....	Edmund Warren.....	New York.....	May 17, 1833
Thrashing machine.....	Stephen Norton.....	New Lebanon, N.Y.	June 29, 1833
Thrashing machine.....	Daniel A. Webster.....	New York.....	June 29, 1833
Thrashing machine.....	Benjamin Hinkley.....	Fayette, Me.....	July 23, 1833
Thrashing machine.....	Jeremiah Fisk.....	Weld, Me.....	Sept. 9, 1833
Thrashing machine.....	L. Yale & P. C. Curtis	Utica, N. Y.....	Sept. 17, 1833
Thrashing machine.....	David Porter.....	Boonesville, N. Y.....	Nov. 19, 1833
Thrashing machine.....	Samuel Clark.....	New York.....	Dec. 26, 1833
Thrashing machine.....	Theodore Smith.....	Enfield, N. Y.....	Feb. 3, 1834
Thrashing machine.....	William K. Weed.....	New York.....	Feb. 11, 1834
Thrashing machine.....	John P. Williams.....	Eldridge, Va.....	Feb. 13, 1834
Thrashing machine.....	Jehial F. Axtell.....	Geneva, N. Y.....	Feb. 18, 1834
Thrashing machine.....	D. Davis & J. Holmes	Fredericksburg, Va.	Mar. 3, 1834
Thrashing machine.....	Sylvanus Leonard.....	Hampden, Me.....	Mar. 27, 1834
Thrashing machine.....	E. Chandler and Jos. A. Holland.....	Kennebec, Me.....	April 25, 1834
Thrashing machine.....	Richard P. Sutherland	Chatham, N. Y.....	April 26, 1834
Thrashing machine.....	James D. Emes.....	Lansingburg, N. Y.	June 4, 1834
Thrashing machine.....	John Melvin.....	Redfield, Me.....	June 18, 1834
Thrashing machine.....	M. Ames & J. Wright	Fredericksburg, Va.	July 10, 1834
Thrashing machine.....	Gideon Hotchkiss.....	Windsor, N. Y.....	July 25, 1834
Thrashing machine.....	John Marshall, jr.....	Sweden, N. Y.....	Aug. 1, 1834
Thrashing machine.....	Isaac Gallop.....	Plainfield.....	Aug. 18, 1834
Thrashing machine.....	Charles Wilson.....	New York.....	Aug. 19, 1834
Thrashing machine.....	John Matthias.....	Manchester, Md.....	Aug. 27, 1834
Thrashing machine.....	Israel Lukens.....	Up. Dublin t'n'sp, Pa	Sept. 2, 1834
Thrashing machine.....	John Shaw.....	Augusta, Me.....	Nov. 19, 1834
Thrashing machine.....	C. P. Tenant and W. Eaton.....	Wooster, Ohio.....	Dec. 17, 1834
Thrashing machine.....	Webber Furbiah.....	Hallowell, Me.....	Dec. 17, 1834
Thrashing machine.....	Luke Hale.....	Hollis, N. H.....	Jan. 7, 1835
Thrashing machine.....	Joseph Ross.....	Boundbrook, N. J.	Feb. 6, 1835
Thrashing machine.....	Thomas D. Burrall.....	Geneva, N. Y.....	Mar. 6, 1835
Thrashing machine.....	David G. McCoy.....	Dublin, Md.....	Mar. 20, 1835
Thrashing machine.....	William W. Ross.....	Chilliquaque t'p, Pa.	Mar. 30, 1835
Thrashing machine.....	Luther Carman.....	Oxford, Me.....	April 2, 1835
Thrashing machine.....	Wm. G. Johnston.....	Bridgetown, N. J.....	April 3, 1835
Thrashing machine.....	Samuel S. Allen.....	Saratoga Sp'ngs, N.Y.	April 3, 1835
Thrashing machine.....	Henry Heberling.....	Harrison co., Ohio..	April 8, 1835
Thrashing machine.....	James Whitehill.....	Frederick co., Md..	April 22, 1835
Thrashing machine.....	S. C. Sneed & W. S. Carpenter.....	Albemarle co., Va.	May 9, 1835
Thrashing machine.....	Washington F. Pagett	White Post, Fred'k county, Va.....	May 22, 1835
Thrashing machine.....	Edmund Warren.....	New York.....	May 29, 1835
Thrashing machine.....	Henry Johnson.....	Washington co., Ten	May 29, 1835
Thrashing machine.....	William Loughton.....	Portsmouth, N. H..	June 6, 1835
Thrashing machine.....	T. Rucker, jr., ass'nes of P. Cheek.....	Murfreesboro', M.T.	June 12, 1835
Thrashing machine.....	Joseph Tyler.....	Brooklyn, Ct.....	July 7, 1835
Thrashing machine.....	Eleazer Brown.....	Chenango, N. Y.....	Jan. 20, 1836

INVENTORS OR DISCOVERERS.	FARMERS.	PLACES.	WHEAT SOWN.
Threshing machine.....	Lewis H. Mann.....	Danville, Pa.....	Feb. 5, 1838
Threshing machine.....	Thomas Bedee.....	Sandwich, N. H.....	Feb. 10, 1836
Threshing machine.....	James Cooper.....	Greene co., Ohio.....	Feb. 20, 1835
Threshing machine.....	Hugh & J. W. Edgar.....	Wayne co., Ohio.....	Mar. 23, 1838
Threshing machine.....	Hugh Barclay.....	Lexington, Va.....	April 28, 1836
Threshing machine.....	N. Goldsborough.....	Easton, Md.....	May 6, 1836
Threshing machine.....	George Beaumont.....	Mount Pleasant, Pa.....	May 6, 1835
Threshing machine.....	Jacob S. Rollins.....	New Gloucester, Me.....	June 2, 1835
Threshing machine.....	J. Bailey & J. Sprinkle.....	Rockingham co., Va.....	June 20, 1835
Threshing machine.....	Porter Cleveland.....	Yancey Mills, Va.....	June 25, 1835
Threshing machine.....	Aaron Parsons.....	Rockfield, Me.....	July 2, 1835
Threshing machine.....	Alex'r W. Bowling.....	Front Royal, Va.....	Dec. 26, 1837
Threshing machine.....	Frederick & H. Grieb.....	Hagerstown, Md.....	Oct. 19, 1836
Threshing machine.....	David Stafford.....	Syracuse, N. Y.....	May 19, 1840
Threshing machine.....	James Cummings.....	Canonsburg, Pa.....	Dec. 10, 1840
Threshing machine.....	Jesse Bowles.....	Louisa, Va.....	June 11, 1842
Threshing machine.....	George Anstine.....	Windsor, Pa.....	April 15, 1843
Threshing machine.....	Henry Hizer & A. B. Crawford.....	Wooster, Ohio.....	June 14, 1843
Threshing machine.....	Christian Reif.....	Hartleton, Pa.....	June 24, 1843
Threshing machine.....	William Eaton.....	Upper Alton, Ill.....	July 28, 1843
Threshing machine.....	Luther & E. Whitman.....	Winthrop, Me.....	Mar. 20, 1844
Threshing machine.....	Cha. W. Cathcart.....	New Durham, Ind.....	April 25, 1844
Threshing machine.....	Frederick A. Stuart.....	Catharine, N. Y.....	June 5, 1844
Threshing machine.....	J. T. & E. Warren.....	New York.....	July 14, 1845
Threshing machine.....	J. A. Taplin & Waldren Eddy.....	New York, N. Y.....	Oct. 3, 1846
Threshing machine.....	Foster & Jones.....	Laporte, Ind.....	Oct. 17, 1846
Threshing machine.....	Jesse Fitzgerald.....	New York, N. Y.....	July 14, 1846
Threshing machine, (on Ballou's improvement.)	J. C. Boyd & A. Kitchen.....	Rush township, Pa.....	June 7, 1895
Threshing machine, (on Ballou's improvement.)	George Jessup.....	Troy, N. Y.....	Dec. 14, 1830
Threshing machine, called the American, &c.	John W. Post and J. Ryan.....	Philadelphia, Pa., & New Baltimore, Va.....	Oct. 10, 1836
Threshing machine, called the Sidney.	Reuel Howard and J. B. Flagg.....	Sidney, Kennebec, Maine.....	Nov. 5, 1835
Threshing machine, chaffing straw	Russel Bradley.....	Williston, Vt.....	Oct. 6, 1835
Threshing & cleaning grain, combination machine.....	Elizur L. Booth.....	Canandaigua, N. Y.....	July 24, 1846
Threshing machine, and cleaning grain.....	Mathew McKeever.....	Staunton, Va.....	Mar. 15, 1839
Threshing machine, clover.....	John P. Ridings.....	Hillsborough, Ohio.....	June 19, 1835
Threshing machine, clover, &c...	A. Burgess & H. Baldwin.....	Washington, Ct.....	Oct. 10, 1835
Threshing machine, clover & rice.	Moses Davenport.....	Philips, Me.....	Oct. 6, 1835
Threshing machine, clover, &c...	Samuel Kern.....	Strasburg, Va.....	May 8, 1836
Threshing machine, concaves employed in.....	Isaac Zellers.....	Greenwich, N. J.....	Jan. 24, 1842
Threshing machine, conducting the straw and grain from the thrasher.....	Luther Whitman.....	Winthrop, Me.....	Aug. 25, 1840
Threshing machine, conveying straw from.....	Uriah Beebe.....	Clarendon, N. Y.....	Mar. 28, 1836
Threshing machine, float tooth...	Abram W. Summers.....	Gates, N. Y.....	Mar. 21, 1831
Threshing machine, flying beater.	Hardin Branch.....	New York.....	Mar. 9, 1833
Threshing machine, grain.....	Ashley Townsend.....	Leroy, N. Y.....	Dec. 30, 1841
Threshing machine, & grist mill.	Mathew Wilson.....	Springfield, Va.....	April 18, 1833
Threshing machine, & hair picker	Joshua Beam.....	Redfield, Me.....	Nov. 5, 1834
Threshing machine, hanging the beaters.....	Holdridge Dewey.....	Norwich, Ct.....	April 27, 1833
Threshing machine, horse power.	Nehemiah P. Stanton.....	Syracuse, N. Y.....	July 21, 1831
Threshing machine, horse power.	John Lammon.....	Macedon, N. Y.....	Dec. 14, 1831
Threshing machine, horse power.	Jacob V. A. Wemple.....	Florida, N. Y.....	Mar. 25, 1834

INVENTIONS OR DISCOVERIES.	PATENTED.	RESIDENCE.	WHEN ISSUED.
Thrashing machine, horse power.	Amos Parker.....	Portland, Me.....	May 14, 1834
Thrashing machine.—See <i>Mowing</i> .			
Thrashing machine, portable.....	H. & J. W. Edgar...	Wayne co., Ohio...	June 6, 1835
Thrashing machine, preventing dust from rising.....	Joseph Ross.....	Boundbrook, N. J. . .	Oct. 8, 1838
Thrashing machine, remov'g straw and separating the grain in....	John Criswell.....	Cecil, Pa.....	Nov. 26, 1840
Thrashing machine, for rice, &c..	Samuel Rogers.....	Ashville, N. C.	July 25, 1831
Thrashing machine, for rice, &c..	William Mathewes..	Charleston, S. C....	Aug. 27, 1835
Thrashing machine, for rice, concave bed.....	Isaac S. Palmer.....	Philadelphia, Pa. . .	Dec. 6, 1831
Thrashing machine, shaking the screen in.....	Jesse Lincoln.....	Uniontown, Pa.....	May 8, 1840
Thrashing machine, shelling corn, &c.....	Wrestum P. Barton..	Batavia, N. Y.....	Feb. 28, 1833
Thrashing machine, shelling and hulling grain.....	Thomas Elliott, jr....	Middletown, Ky....	Mar. 26, 1839
Thrashing machine, spring beater, breaking hemp and flax.....	Daniel A. Webster...	New York.....	Dec. 16, 1833
Thrashing machine, straw carrier and separator for.....	Russell Tomlinson...	Jackson, Mich.....	June 27, 1846
Thrashing machine, & straw cutter.....	Namon Goodsell.....	Clinton, N. Y.....	Mar. 21, 1823
Thrashing machine, & straw cutter.....	John Stewart.....	Cambridge, Md.....	Nov. 17, 1834
Thrashing machine, vibrating....	Moses Peacock.....	Kennett's square, Pa	May 26, 1827
Thrashing machine, teeth for....	Jeremiah Wrightson..	Tobacco Stick, Md..	May 17, 1839
Thrashing machine, and winnowing grain.....	Andrew Ralston.....	Hopewell, Pa.....	Feb. 21, 1842
Thrashing and reaping grain.....	Jeremiah Darling....	Adrian, Mich.....	Mar. 7, 1846
Thrashing rice.....	Edmund Warren.....	New York.....	Feb. 22, 1822
Thrashing rice.....	Jehiel Butts.....	Georgetown, S. C....	May 20, 1830
Thrashing rice.....	Ephraim Sands.....	Cincinnati, Ohio....	May 24, 1830
Thrashing rice, rotary.....	David Flagg, jr.....	New York.....	Nov. 29, 1830
Thrashing and shelling corn.....	Asa Cady.....	Florida, N. Y.....	Dec. 27, 1809
Thrashing and shelling corn.....	Jacob Hetzel & Jesse Bevier.....	Ithaca, N. Y.....	Feb. 14, 1831
Thrashing and shelling corn, and grinding apples.....	Alonzo L. Smith.....	Weedsport, N. Y....	April 27, 1831
Thrashing and shelling corn, and grinding apples.....	Jesse Bevier.....	Sempronius, N. Y..	Dec. 11, 1832
Thrashing and smut machine....	G. Bostwick and H. Spencer.....	Marylandtown, N.Y	Dec. 24, 1824
Thrashing and winnowing.....	Samuel Houston.....	Virginia.....	May 3, 1804
Thrashing and winnowing.....	Moses Davenport....	Phillips, Mass.....	Nov. 23, 1837
Thrashing and winnowing*.....	J. A. & H. A. Pitts..	Winthrop, Me.....	Dec. 29, 1837
Thrashing & winnowing machine	Lawrence Hock.....	Frederick, co., Md..	Feb. 15, 1809
Thrashing & winnowing machine	Seth Ballou.....	Livermore, Me.....	Dec. 12, 1821
Thrashing & winnowing machine	Edmund Warren.....	Augusta, Me.....	Mar. 6, 1824
Thrashing & winnowing machine	Sylvanus C. Hersey..	Rochester, N. Y....	Nov. 7, 1826
Thrashing & winnowing machine	Samuel Slater.....	Philadelphia, Pa....	Oct. 1, 1830
Thrashing & winnowing machine	William Loughton...	Portsmouth, N. H..	Nov. 17, 1834
Thrashing & winnowing machine	Reuben W. Currier..	East Kingston, N. H	Sept. 17, 1838
Thrashing and winnowing, & flax breaking machine.....	Edmund Warren.....	New York.....	Aug. 11, 1827
Thrashing & winnowing machine, &c., grain separators.	J. V. A. Wemple and George Westinghouse.	Mohawk } N.Y Schoharie.. }	July 13, 1844
Thrashing and winnowing wheat and small grain.....	Thomas D. Burrall...	Geneva, N. Y.....	Dec. 6, 1830
Tobacco, curing.....	John Robinson.....	Charlotte, Va.....	Feb. 25, 1809
Tobacco, curing.....	Edmund Pendleton...	Louisa co., Va.....	Dec. 18, 1826
Tobacco, curing.....	M. & Thos. Baker....	Louisa co., Va.....	Mar. 4, 1828
Tobacco, curing.....	Davis G. Tuck.....	Halifax co. h., Va..	Oct. 1, 1830
Tobacco, curing.....	Tyree G. Newbold...	Franklin co., Va....	Jan. 11, 1831

Antedated June 29, 1837.

AGRICULTURE.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN AWARDED.
Tobacco, curing, by fires or stoves	Davis G. Tuck.....	Halifax c. h., Va....	Feb. 15, 1801
Trees, &c., mode of felling.....	James Hamilton.....	New York.....	June 26, 1825
Trees, fruit, preventing their destruction, &c.....	Paul Adams.....	Newbury, Mass....	June 19, 1812
Trees, fruit, preventing canker worm in	Jonas Kendall.....	Leominster, Mass..	Jan. 4, 1816
Trees, fruit, preventing canker worm in	Jonathan Dennis, jr....	Portsmouth, R. I....	June 21, 1838
Trees, protecting from the canker worm*.....	Daniel Newhall.....	Lynn, Mass.....	Oct. 31, 1840
Washing potatoes and roots.....	William Ellis.....	Waterville, Me.....	Feb. 25, 1835
Weevil, mode of destroying.....	William Armstead.....	Prince Wm. co., Va.	Nov. 13, 1810
Weevil, mode of destroying.....	James A. Lee, adm'r of James Lee.....	Maysville, Ky.....	Aug. 17, 1835
Winnowing clover seed.....	Jonathan Roberts, jr....	Pennsylvania.....	Feb. 13, 1796
Winnowing clover seed.....	Asher Spicer.....	Connecticut.....	April 22, 1802
Winnowing clover seed.....	Martin Miller.....	Pennsylvania.....	July 19, 1802
Winnowing clover seed.....	John Cottle.....	Pennsylvania.....	Mar. 21, 1803
Winnowing clover seed.....	Timothy Kirk.....	York, Pa.....	July 28, 1803
Winnowing clover seed.....	George Faber.....	Chambersburg, Pa..	April 5, 1832
Winnowing clover seed.....	David Rankin.....	Augusta co., Va....	Mar. 18, 1834
Winnowing clover seed.....	Reuben Ranger.....	Milton, Me.....	Aug. 21, 1834
Winnowing clover seed.....	Hiram Hoth.....	Weld, Me.....	Sept. 26, 1835
Winnowing clover seed.....	James Manning.....	Lambertville, N. Y..	Jan. 6, 1836
Winnowing clover seed & wheat.	David Buckingham....	Pennsylvania.....	Dec. 21, 1803
Winnowing, fanning mill, for cleaning grain.....	Calvin O. Guernsey....	Russia, N. Y.....	Oct. 12, 1844
Winnowing flax seed.....	Paul Gaultry.....	New York.....	April 24, 1804
Winnowing flax seed.....	Asa Hook.....	Sears Mount, Me....	Sept. 9, 1823
Winnowing grain.....	Peter H. Schenck.....	New York.....	Feb. 15, 1810
Winnowing grain.....	William H. Peabody....	Woodbury, Ct.....	June 8, 1810
Winnowing grain.....	John James, 3d.....	Plymouth, Mass....	May 4, 1813
Winnowing grain.....	Israel Honeywell.....	Hillsdale, N. Y....	April 27, 1816
Winnowing grain.....	A. Fettrow.....	York, Pa.....	May 28, 1818
Winnowing grain.....	Thomas Beatty.....	Washington, D. C..	Oct. 5, 1818
Winnowing grain.....	Isaac Bromwell.....	Baltimore, Md.....	Nov. 26, 1818
Winnowing grain.....	Holland Child.....	Canton, Me.....	Jan. 11, 1823
Winnowing grain.....	John Litzenger.....	Philadelphia, Pa....	Nov. 24, 1823
Winnowing grain.....	Lou Forriester.....	Ridgefield, Ct.....	Feb. 13, 1824
Winnowing grain.....	John Tyler.....	Claremont, N. H....	May 18, 1827
Winnowing grain.....	Gilbert Arnold.....	Angelica, N. Y.....	June 17, 1830
Winnowing grain.....	Michael Urffer.....	Upper Milford, Pa..	Oct. 1, 1830
Winnowing grain.....	Thomas Reese.....	Baltimore, Md.....	July 20, 1831
Winnowing grain.....	Joseph D. Prescott....	Chesterfield, Me....	July 20, 1831
Winnowing grain.....	Abel Look and Wm. Coleman, jr.....	Fredericktown, Md..	Mar. 21, 1832
Winnowing grain.....	Markwell, Thomas....	Alfred, Me.....	May 30, 1837
Winnowing grain.....	David H. Cole.....	Portland, Me.....	July 17, 1838
Winnowing grain.....	George A. Johnson.....	Johnsonburg, N. Y..	Dec. 15, 1838
Winnowing grain and berries....	M. N. Armstrong and W. H. King.....	New York.....	Dec. 2, 1834
Winnowing grain and destroying insects.....	Joel Morgan.....	Baltimore, Md.....	Feb. 28, 1810
Winnowing grain and rice, &c....	Abel Look.....	Pittsfield, Mass....	June 13, 1831
Winnowing grain and seed.....	William Tallock.....	Lantern Mill, Va....	Oct. 28, 1806
Winnowing machine.....	William Tunstall.....	Richmond, Va.....	June 30, 1804
Winnowing machine.....	H. Watkins.....	Washington co., Md.	Mar. 18, 1819
Winnowing machine.....	Josiah Browne.....	New London, N. H..	Nov. 21, 1820
Winnowing machine.....	Harvey Beadle.....	Wallingford, Ct....	Mar. 30, 1822
Winnowing machine.....	David S. Buck.....	Hurley, N. Y.....	Feb. 10, 1823
Winnowing machine.....	John Peyton.....	Orange co., Va.....	Nov. 7, 1825
Winnowing machine.....	Truman B. Brown.....	Locke towns'p, N. Y.	Mar. 6, 1835
Winnowing machine.....	Jeremiah Nichols.....	Leet co., Md.....	June 15, 1835
Winnowing machine.....	Edward P. Fitzpatrick..	Mount Morris, N. Y.	Nov. 14, 1835

* Additional improvement, dated April 24, 1841.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCES.	WHEN ISSUED.
Winnowing machine	David Wilson	Johnston, Vt.	Feb. 30, 1836
Winnowing machine	Jonathan Beane	Mountville, Me.	Mar. 31, 1836
Winnowing machine	Abel & Asahel Lomax	Clinton co., Ohio ...	May 8, 1836
Winnowing machine	G. W. D. and Joseph Culp	Allen ville, Ia.	Aug. 4, 1843
Winnowing machine	James Starr	New Lisbon, Ohio ..	Sept. 9, 1843
Winnowing machine	Thomas Cole & John Littlefield	Allen ville, Ia.	Aug. 7, 1844
Winnowing machine	Thomas Chandler and Asa D. Reed	Miles, Mich. }	Dec. 7, 1844
Winnowing machine	Isaac T. Grant	Schaghticoke, N. Y. ...	July 10, 1845
Winnowing machine	Anthony Cooley	Kalamazoo, Mich.	Sept. 2, 1845
Winnowing machine, fanning mill	Samuel Dodge	Cleveland, Ohio	Feb. 9, 1808
Winnowing machine, fanning mill	Oliver Barret, jr.	Sandy Hill, N. Y.	Mar. 23, 1808
Winnowing machine, fanning mill	Benjamin Atwell	Burlington, N. Y.	Sept. 19, 1808
Winnowing machine, fanning mill	Samuel Snedeker	Johnstown, N. Y.	April 27, 1810
Winnowing machine, fanning mill	Thomas W. Jessup	Fredericktown, Md. ...	June 18, 1811
Winnowing machine, fanning mill	Thomas S. Barnum	Sharon, Ct.	Jan. 15, 1812
Winnowing machine, fanning mill	Samuel Fitch	Homer, N. Y.	Oct. 23, 1814
Winnowing machine, fanning mill	Joel Soper	Windsor, Ct.	Dec. 3, 1814
Winnowing machine, fanning mill	Benjamin D. Beecher	New Haven, Ct.	May 30, 1816
Winnowing machine, fanning mill	Daniel Donoghoe	New York	April 16, 1821
Winnowing machine, fanning mill	David Neefus	Flatlands, N. Y.	Sept. 22, 1823
Winnowing machine, fanning mill	Lemuel Peck	Brookfield, Ct.	Aug. 13, 1824
Winnowing machine, fanning mill	Enoch Walker	Springfield, Pa.	Mar. 28, 1825
Winnowing machine, fanning mill	Ovid Pinney & James Olmstead	Caledonia, N. Y.	Nov. 7, 1826
Winnowing machine, fanning mill	Enoch Walker	Springfield, 4 cor., Pa.	Sept. 20, 1827
Winnowing machine, fanning mill	Justus Frary	Southampton, Mass. ...	Feb. 17, 1829
Winnowing machine, fanning mill	David Sears	Franklin, N. Y.	Mar. 24, 1830
Winnowing machine, fanning mill	William C. Hawley	Brookfield, Ct.	Oct. 1, 1830
Winnowing machine, fanning mill	Moses Elliot	Boscawen, N. H.	June 13, 1831
Winnowing machine, fanning mill	Samuel Fitch	Edmeston, N. Y.	Jan. 6, 1832
Winnowing machine, fanning mill	P. Prine & L. Huestis	Auburn, N. Y.	Feb. 23, 1832
Winnowing machine, fanning mill	David Clinton	New Haven, Ct.	Nov. 29, 1832
Winnowing machine, fanning mill	J. W. Hunter, M. L. Hunt, & S. Holman	Oakland co., M. T. ...	Dec. 18, 1832
Winnowing machine, fanning mill	Nathan Wells	Milford, Pa.	Sept. 11, 1833
Winnowing machine, fanning mill	Alfred Ervin	Jefferson, Md.	Sept. 30, 1839
Winnowing machine, fanning mill, grain	David Philips and Asa Jackson	Georgetown, Pa. } Franklin Mills, Va. }	May 4, 1841
Winnowing machine, screen for	D. A. & S. Church	Friendship, N. Y. ...	June 27, 1846
Winnowing machine, tub mill	Moses Elliot	Concord, N. H.	May 18, 1816
Winnowing mill	Daniel Clow	Port Byron, N. Y. ...	June 16, 1846
Winnowing mill, machinery	James Ruple	Washington, Pa.	May 19, 1832
Winnowing mill, machinery	Daniel Davis	Cornish, N. H.	July 5, 1832
Winnowing screen, for cleaning grain	Ephraim Tisdale	Windham, Ct.	July 17, 1815
Winnowing screen, pendulum	Lewis Dupree	Charleston, S. C.	April 1, 1807
Winnowing screen, separating grain, &c.	Peter Broughton	Charleston, S. C.	Aug. 5, 1831
Winnowing, separat'g clover chaff from straw	John Bolton	Harrisburg, Pa.	July 28, 1831
Winnowing, separat'g clover seed from chaff	Reuben Ranger	Wilton, Me.	Aug. 21, 1834
Winnowing, separat'g garlic from grain	William C. Grimes	York, Pa.	Sept. 3, 1840
Winnowing, separat'g garlic from wheat	Jonathan F. Barrett ..	N. Granville, N. Y. ...	Oct. 31, 1840
Winnowing, separating grain from straw	Manning Packard and Christian B. Packard ..	Clarendon, N. Y. ...	Nov. 18, 1844
Winnowing, separating onion seed from grain	L. Ruggles & Daniel Tomlinson	Brookfield, Ct.	Mar. 16, 1810

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Winnowing, separating wild peas, &c., from grain*.....	Lester Butler.....	Cobleskill, N. Y....	June 3, 1837
Winnowing and thrashing.....	E. P. Davis and W. Carey.....	Riga, N. Y.....	June 11, 1829
Winnowing wheat.....	Benjamin Tyler.....	New Hampshire....	April 15, 1796
Winnowing wheat.....	Stephen Sullwell.....	New York.....	July 9, 1802
Winnowing wheat.....	William Davis.....	Fairfield, Ct.....	Jan. 24, 1815
Winnowing wheat.....	William Adams.....	Virginia.....	Mar. 1, 1816
Winnowing wheat.....	Samuel Weaver.....	Frederick co., Md..	Mar. 11, 1816
Winnowing wheat.....	Samuel Martin & Zad. Chapin.....	Ontario co., N. Y... Jan. 18, 1820	
Winnowing wheat.....	Jedediah Tallman....	Oneida co., N. Y... May 8, 1822	
Winnowing wheat.....	George Hoffman.....	Fredericktown, Md.. Aug. 21, 1829	
Winnowing wheat.....	John Deakynne.....	Petersburg, Va..... Sept. 13, 1833	
Winnowing wheat.....	D. Flanders and C. Rathburn.....	Fort Covington, N. Y Feb. 13, 1836	
Winnowing wheat.....	Stephen M. Yeaman....	Elizabethtown, Ky.. June 20, 1846	
Winnowing wheat.....	Jacob Shermer.....	New Valley, Md.... July 20, 1846	
Winnowing, wheat fans.....	David Watkins.....	Port Republic, Va.. Feb. 2, 1844	
Winnowing, wheat fans.....	William Stanley.....	Jamestown, N. C... Nov. 18, 1844	
Yoke, horse.....	Adolphus Allen.....	Troy, N. Y..... June 29, 1827	
Yoke, horse and oxen.....	Gideon Hotchkiss....	Windsor, N. Y..... Aug. 31, 1837	
Yoke, horse.....	Elijah H. Danforth....	Busti, N. Y..... July 28, 1846	
Yoke, ox.....	David Chappel.....	Sheldon, N. Y..... Sept. 3, 1846	

* Reissued March 8, 1839.

CLASS No. II.

METALLURGY

AND

Manufacture of Metals and Instruments therefor.

LIST OF PATENTS.

CLASS II.—METALLURGY and Manufacture of Metals and Instruments therefor.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Andirons.....	John Stickney.....	Baltimore, Md.....	May 4, 1805
Andirons.....	Willoughby Dexter..	Winchester, Conn..	May 17, 1814
Andirons.....	William Pye.....	New York.....	Nov. 16, 1821
Andirons.....	Edmund Smylie.....	New York.....	Feb. 1, 1827
Andirons.....	John Griffiths.....	New York.....	Mar. 15, 1827
Andirons.....	William Wilson.....	Greenfield, Mass....	May 16, 1832
Andirons, bars.....	J. Cockran.....	Batavia, N. Y.....	July 1, 1836
Andirons, conveying air through.	John R. Remington..	Lowndes co., Ala....	May 16, 1846
Andirons, construction of.....	Edward Smylie.....	New York, N. Y....	July 12, 1843
Andirons.—See fire-place, Class 5.			
Andirons, repairing and finishing.	Edmund Smylie.....	New York.....	Feb. 22, 1827
Anvil and hammer.....	Charles Josselyn.....	Pembroke, Mass....	Oct. 9, 1816
Anvil, block.....	S. Van Tiers.....	Hanover Iron Works, Pa.....	Mar. 19, 1836
Anvils, machine for making.....	John Taylor.....	Shadegap, Penn....	Jan. 31, 1844
Auger for boring earth.....	John M. Cooper.....	Newbern, Ala.....	Oct. 7, 1842
Auger, screw, manufacturing.....	William Field.....	Pawtucket, R. I....	April 15, 1844
Awl hafts.....	Edwin Martin.....	Grafton, Mass.....	Mar. 21, 1843
Awl haft.....	David M. Smith.....	Gilsum, N. H.....	Oct. 25, 1832
Awl haft.....	David M. Smith.....	Gilsum, N. H.....	Mar. 31, 1836
Awl haft.....	William Campbell....	Gilsum, N. H.....	July 1, 1836
Awls, attaching to hafts.....	Dexter Pierce.....	Montague, Mass....	Aug. 13, 1838
Awls, drills, &c., setting.....	Erastus B. Bigelow and Stephen Brigham.	W. Boylston town- ship, Mass.....	Jan. 27, 1835
Awls, sockets, and other tools...	Herrick Aikin.....	Dracut, Mass.....	Dec. 16, 1833
Axes.....	John Alley, sen.....	Pise, Ind.....	April 9, 1829
Axes.....	Erastus Shaw and R H. Burk.....	Canton, Conn.....	Nov. 3, 1831
Axes.....	Josiah Pratt, jr.....	Charlemont, Mass..	April 6, 1832
Axes.....	Benjamin Smith.....	Canton, Conn.....	Nov. 2, 1832
Axes.....	Elisha K. Root.....	Canton, Conn.....	Mar. 30, 1836
Axes.....	(J. Wright, assignee of D. C. Stone).....	Naponock, N. Y....	Apr. 21, 1838
Axes, forging.....	David Hinman.....	Canton, Conn.....	June 29, 1833
Axes, forging.....	Erastus Shaw.....	Canton, Conn.....	June 29, 1833
Axes, forming the eyes of.....	Milton D. Whipple..	Douglass, Mass....	Jan. 31, 1833
Axes, hoes, scythes, pitchforks, &c.	Luther Olds.....	Onconta, N. Y.....	July 9, 1833
Axes, hoes, scythes, pitchforks, &c.	Joseph P. Hazard....	Washington co., R. I.	Aug. 9, 1833
Axes, hoes, scythes, pitchforks, &c.	John F. Mackie.....	New York.....	Nov. 19, 1833
Axes, hatchets, &c.....	David Hinman.....	Winchester, Conn..	Nov. 2, 1832
Axes, hatchets, &c.....	Elisha K. Root.....	Collinsville, Vt....	Dec. 10, 1838
Axes, machine for making.....	Isaac W. Turner.....	Baltimore, Md.....	Nov. 4, 1842
Axes, oval.....	Stephen Hyde.....	Williamsburg, Mass.	Jan. 29, 1830
Axes, oval.....	Stephen Hyde.....	Williamsburg, Mass.	March 2, 1831
Axes, oval.....	Aaahel Collins.....	Winstead, Conn....	Oct. 25, 1832
Axes, pick.....	Luke Baker.....	Putney, Vt.....	Jan. 15, 1822
Axes, &c., sharpening.....	John Shotwell.....	New Jersey.....	Mar. 16, 1799
Bands, contracting, wrought iron.	Edward Cooper.....	Richmond, Va.....	Mar. 16, 1833
Bands, iron keyed.....	Edward Cooper.....	Richmond, Va.....	Sept. 14, 1826
Bands, key for tobacco casks.....	James M. Talbott....	Richmond, Va.....	Sept. 14, 1840
Bands.—See Class 13.			
Bars, hollowing out iron.....	Thomas Rowland.....	Gloucester co., Pa..	Dec. 24, 1819

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Bars, for grates and stoves.....	Jordan L. Mott.....	New York.....	Oct. 14, 1835
Beams, iron, pattern for casting..	Aaron Dana.....	Troy, N. Y.....	Dec. 28, 1834
Bedstead fastenings.—See Class 17.			
Bedstead fastenings.....	E. F. Gazzam.....	Pittsburg, Pa.....	Jan. 23, 1846
Bedstead fastenings.....	Benjamin Hinkley...	Utica, N. Y.....	Dec. 9, 1846
Bells.....	Robert Leslie.....	Philadelphia, Pa....	Feb. 2, 1793
Bells.....	William Hoyt.....	Brookville, Ind.....	March 3, 1825
Bells.....	H. Tyler.....	Utica, N. Y.....	Oct. 20, 1826
Bells, brazing and bronzing them for cows or sheep.....	Samuel Booth.....	Berlin, Conn.....	June 1, 1832
Bells for cows.....	Simon Newton.....	Connecticut.....	Dec. 22, 1804
Bells for fire engines.....	James P. Parke.....	Philadelphia, Pa....	Dec. 19, 1808
Bells, hanging.—See Class 17.			
Bells for horses.....	Jason Barton.....	Cairo, N. Y.....	Mar. 18, 1834
Bells, improvement in hotel.....	T. D. Jackson and A. Judson.....	Rochester, N. Y....	Oct. 17, 1846
Bells, moulding and casting.....	Benjamin Hanks.....	Albany, N. Y.....	Nov. 4, 1816
Bit, spiral, for cutting screws....	George Page.....	New Hampshire.....	Nov. 17, 1836
Blowing and striking, mode of...	L. Hoyt and E. Pierce	Poultney, N. Y.....	March 3, 1837
Blow-pipe, for blast furnaces.....	John Barker.....	Baltimore, Md.....	Mar. 3, 1837
Bolts, casting, for ships.....	Joseph Share.....	Baltimore, Md.....	Oct. 28, 1805
Bolts, copper, uniting.....	Griffith Morgan.....	Onancock, Va.....	May 2, 1843
Bolts, copper, for ship building...	Berg and Ivers.....	New York.....	Mar. 15, 1834
Bolts and bars, forging.....	Clement Rentgin.....	Pennsylvania.....	Nov. 17, 1796
Bolts, door and window.....	George Smith.....	Philadelphia, Pa....	Dec. 18, 1839
Bolt in door-fastenings, mode of operating.....	Albert Bingham.....	Boston, Mass.....	Jan. 5, 1844
Bolts, machine for cutting off the ends of.....	John Rewey.....	Berkshire, N. Y....	May 8, 1811
Bolts and nuts, and squaring and finishing the heads of.....	John Bellemere.....	Philadelphia, Pa....	Sept. 26, 1839
Bolts and spike, drawing.....	Richard Haynes.....	Portsmouth, Va....	July 2, 1836
Bolt rack, for doors.....	John Brown and Geo. W. Robinson.....	Providence, R. I....	Mar. 24, 1826
Bolts, trimming the heads of.....	Micah Rugg.....	Southington, Conn..	Aug. 31, 1842
Bomb-lance.—See Class 22.			
Boring the inside groove, fliers for double speeders.....	James S. Brown.....	Pawtucket, Mass....	July 9, 1838
Boxes for pulleys, casting metallic	Lebbeus Larrabee....	Nantucket, Mass....	Nov. 4, 1811
Brads, cutting.....	Jonathan Ellis.....	.....	Feb. 10, 1807
Brads, cutting.....	Seth Boyden, jr.....	Boston, Mass.....	June 27, 1815
Brads, cutting.....	Henry Waterman....	New York.....	Jan. 10, 1840
Brads, cutting and manufacturing iron plates.....	Edmund Gammon....	Gorham, Maine....	Oct. 20, 1830
Brads, cutting, revolving.....	Asa B. Woods and Eb. Talbot, jr.....	Windsor, Conn....	Feb. 13, 1825
Brads, and sprig machine.....	Gudley Jenkins.....	Plymouth co., Mass.	May 16, 1817
Brads, and tack machine.....	Samuel Rogers and T. Blanchard.....	Boston, Mass.....	Oct. 3, 1817
Brand.....	Eli Barnes, G. Hill, and S. B. Hawkins.....	Ashtabula, Ohio....	Feb. 25, 1835
Brand, for flour barrels.....	William Ross.....	New Orleans, La....	Dec. 2, 1825
Brand, for flour barrels.....	Samuel Huse.....	Newburyport, Mass.	June 28, 1832
Buckles, cutting and finishing....	James Carman.....	Hudson, N. Y.....	Oct. 12, 1814
Buckles, mechanical spring.....	John Green.....	New York.....	May 20, 1807
Buckles.—See Class 21.			
Buckles.....	Julius W. Hatch.....	Manlius, N. Y.....	Feb. 20, 1844
Buckles.....	Isaac B. Verplank....	Mentz, N. Y.....	March 9, 1844
Buckles.....	Henry Lawrence.....	Manlius, N. Y.....	July 13, 1844
Buckles and clasps.....	William Church.....	Citizen United States, now in Birmingham, England.....	Feb. 18, 1840
Button, plate turn, for fastening cupboard and other doors.	Philos, Eli W., and John A. Blake.....	New Haven, Conn..	Mar. 21, 1843

* Additional improvement, September 10, 1840.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Cables, chain.....	Isaiah Jemmings.....	New York.....	Oct. 29, 1831
Cables, chain.....	Erastus Bartholomew..	Boston, Mass.....	May 17, 1836
Cables, chain, &c. <i>See Class 7.</i>			
Card teeth, cutting.....	Joshua Lamb.....	Leicester, Mass.....	Aug. 1, 1837
Card teeth, elastic steel, fish hooks, &c.....	Eb. Jenks.....	Colebrook, Conn...	Nov. 13, 1813
Carriage spring.— <i>See Class 10.</i>			
Carriage steps.....	David & E. Z. Little..	Gettysburg, Pa.....	Oct. 7, 1846
Case, metallic, for kettles, &c.....	Charles Gaston.....	Williamsport, Pa...	Jan. 31, 1812
Castors, for bedsteads*.....	Philos Blake, Eli W. Blake, & J. A. Blake	New Haven, Conn...	June 30, 1838
Castor, globe.....	Walter Hunt.....	New York.....	April 22, 1833
Castings, chilled cylinders & cones	James Harley.....	Pittsburgh, Pa.....	Mar. 3, 1835
Castings, metallic pin for chilling the interior of.....	William H. Saunders..	Greensburg, N. Y..	Nov. 26, 1835
Castings, mould for iron pipes, &c.	John D. Morris.....	Kensington, Pa.....	Dec. 2, 1835
Castings, smoothing the oxide and sand on.....	Bradford Seymour...	Utica, N. Y.....	Dec. 2, 1835
Catches oblique, &c., fastenings on plates, &c., of cast iron.....	Jordan L. Mott.....	New York.....	Dec. 1, 1840
Chains, frame.....	David Leslie.....	New York.....	Nov. 19, 1837.
Chains, &c., preventing them from slipping.....	James Cooper.....	Augusta county, Va.	June 17, 1823
Check bolt, of doors, locks, or latches.....	Albert Bingham.....	Boston, Mass.....	July 17, 1842
Clasps of carpet bags.....	James Sellers & Abraham L. Pennock...	Philadelphia, Pa....	May 25, 1840
Coffins, metallic.— <i>See Class 22</i>			
Columns, cast iron, &c., for buildings.....	Jordan L. Mott.....	New York.....	June 11, 1836
Compass.....	Samuel Kern.....	Strasburg, Pa.....	July 31, 1846
Copper, alloying, &c.....	M. Sorel.....	Paris, France.....	Sept. 17, 1839
Copper, tin, &c., double seaming.	Joseph N. Hews.....	Putnam, Ind.....	Jan. 23, 1846
Copper, sheet, &c., double seaming	G. R. Moore.....	Philadelphia, Pa...	Sept. 19, 1846
Crowbars, making.....	James Delliba.....	Watervliet, N. Y..	Sep. 26, 1823
Curry-combs, making.....	Nathaniel C. Sanford.	Meriden, Conn.....	Nov. 3, 1838
Curry-comb.....	Thomas Wilkinson...	Cambridge, N. Y..	Aug. 16, 1844
Curry-comb.....	William Wheeler.....	West Poutney, Vt.	April 26, 1846
Cutlery, cleaning and polishing...	Martin N. Armstrong..	New York.....	Jan. 24, 1842
Cutlery, cleaning and polishing...	William Vine.....	New York, N. Y..	Feb. 28, 1844
Design for door springs.....	Isaac B. Hartwell....	Woodstock, Vt.....	April 10, 1843
Dies for cutting and forming cultivator teeth.....	David B. Rogers.....	Stafford, N. Y.....	Nov. 8, 1845
Dies, for making iron door knobs, and of plate-metal.....	Lucien E. Hicks.....	Middletown, Conn..	June 27, 1840
Dies, metal.....	Benjamin Mead and Giles Richards.....	Boston, Mass.....	July 2, 1814
Dies, founder's, moulding.....	Eb. Bryant.....	New London, Conn.	Mar. 18, 1818
Dies and taps.....	Archibald Lement.....	Pittsburgh, Pa.....	Jan. 23, 1830
Door fastener.....	Calvin Washburn....	Bridgewater, Mass..	April 18, 1832
Door fastener, mortise.....	Leonard Foster.....	Boston, Mass.....	Feb. 25, 1831
Door fastener, spring catch.....	James Buck.....	Bucksport, Maine...	Sep. 28, 1831
Door fastenings.....	Jno. C. Palmer.....	East Haddam, Conn.	Oct. 7, 1845
Door, fastening on the inside of, instrument for.....	Benjamin H. Green..	Princeton, N. J....	June 11, 1841
Door fasteners, mortise latch.....	Leonard Foster.....	Boston, Mass.....	Aug. 28, 1841
Door and other knobs, attaching to their collars.	Livingston, Roggan, Adams, Phillips and Phillips.....	Bucksburg, Pa.....	Dec. 10, 1846
Door knobs, casting.....	William Higgs.....	Utica, N. Y.....	Dec. 10, 1846
Door knobs, shanks for.....	Livingston, Roggan, & Adams.....	Pittsburg, Pa.....	July 7, 1846
Door knockers, cast iron, with brass plates.....	Increase Wilson.....	New London, Conn.	Mar. 11, 1831

* Retained July 30, 1845.

† Retained July 3, 1845.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Door plates.....	I. S. Richardson.....	Boston, Mass.	Oct. 15, 1826
Door plates.....	William C. Austin....	Greensville, Va.	Jan. 31, 1827
Door springs.....	Isaiah Eaton.....	Boston, Mass.	Feb. 20, 1829
Door springs, vertical wire.....	John Codman.....	Boston, Mass.	Dec. 26, 1823
Door springs.....	Thomas Thorpe.....	W't C'mb'd'ge, Mass.	Dec. 7, 1827
Door springs.....	William Wilson.....	Greenfield, Mass....	July 17, 1828
Door, wire springs for.....	John Codman.....	Boston, Mass.	Aug. 17, 1835
Door, springs for shutting.....	Ithiel S. Richardson..	Boston, Mass.	Oct. 20, 1837
Door spring.....	Samuel Sawyer.....	Boston, Mass.	Jan. 21, 1841
Dressing iron and other substances	John G. Tibbets.....	New York, N. Y....	June 21, 1839
Drilling iron.....	John H. Currier and Wing H. Taber....	Fair Haven, Mass..	July 8, 1839
Drilling metallic and other sub- stances.....	Eliza Hall.....	Byron, N. Y.	Aug. 29, 1839
Drill or borer, governing the feed of	John B. Grout.....	Birmingham, Mich.	May 30, 1844
Drilling machine.....	Amos Morgan.....	Wooster, Ohio.....	May 30, 1844
Drilling machine.....	R. H. Springstead....	Wooster, Ohio.....	Feb. 20, 1843
Drilling iron, &c., machine for ...	Amos Morgan.....	Wooster, Ohio.....	July 20, 1843
Drills for metal.....	William R. Jones.....	Granville, N. Y....	Jan. 11, 1836
Drill-stock, geared.....	George Page.....	Keene, N. H.	May 8, 1836
Drill-stock, screw.....	Charles Babbitt.....	Taunton, Mass.....	April 29, 1834
Drums, soldering, straightening factory.....	Luke N. Perry.....	Worcester, Mass....	Jan. 23, 1829
Dust, metallic particles, &c., pro- duced during the operation of grinding, method of removing, &c.....	Thaddeus Fairbanks..	St. Johnsbury, Vt..	May 26, 1843
Edging, turning the edges of tin, copper, &c.....	John Woolley.....	New York.....	Mar. 16, 1831
Edging metal plates for roofing houses.....	Daniel A. Piper.....	Cincinnati, Ohio....	Aug. 15, 1831
Edging tin plate, &c.....	Charles F. Fisher.....	York, Pa.	Feb. 28, 1839
Emory, manufacturing.....	William Garret.....	New Lisbon, N. Y....	Feb. 27, 1819
Fasteners, shutter.....	John L. Whetstone & P. C. Guion.....	Cincinnati, Ohio ...	May 19, 1843
Fencing, iron*.....	Paulus Headle.....	New York.....	Feb. 21, 1822
Fencing, wire.....	Samuel F. Dexter....	Auburn, N. Y.	Aug. 19, 1833
Ferules of canes, &c., bottom end of, constructing.....	Jonathan Ball.....	Buffalo, N. Y.	Oct. 11, 1841
Fettors for horse.....	Joseph Watson.....	New Canaan, Conn.	Jan. 15, 1818
Files, cutting.....	Ernst Gebbe.....	Northampton co. Pa.	Oct. 10, 1811
Files, cutting.....	Merris B. Belknap...	Greenfield, Mass....	Jan. 16, 1812
Files, cutting.....	Charles Hesser and Amos Paxson.....	Philadelphia, Pa....	April 11, 1812
Files, cutting.....	Morris B. Belknap...	Worcester, Mass....	June 13, 1812
Files, cutting.....	William T. James....	Greenwich, N. Y....	Nov. 19, 1812
Files, cutting.....	Cyrus Jackson.....	Butternuts, N. Y....	May 28, 1818
Files, cutting.....	Charles & Daniel Platt	Sharon, Conn.....	Mar. 7, 1814
Files, cutting.....	Silas Hawes.....	Bennington, Vt....	May 11, 1814
Files, cutting.....	John Hatch.....	Dedham, Mass.....	May 1, 1815
Files, cutting.....	John Hatch.....	Roxbury, Mass....	Oct. 10, 1828
Files, cutting, and rasps.....	Samuel G. White.....	Haverhill, Mass....	July 11, 1812
Files, cutting.....	Levi Anderson.....	Kensington, Phil.Pa.	Nov. 16, 1841
Files, machine for cutting.....	Solomon Whipple....	Albany, N. Y.	Feb. 12, 1845
Files.....	Richard Flint.....	Meriden, Conn.....	July 24, 1846
Files, machinery for cutting.....	Joseph A. Hyde, assign- ee of M. H. Fisher.	Bridgewater, Mass..	Aug. 28, 1846
Files, manufacturing.....	Levi & David Anderson	Philadelphia, Pa....	April 20, 1812
Files, renewing old.....	A. P. & E. Brittingham	New York.....	July 27, 1829
Filing hand saws.....	James S. Harris.....	Poultney, Vt.....	June 21, 1836
Fire-proof chest, †.....	Jesse Delano.....	New York.....	Mar. 7, 1836
Fire-proof chest.....	John Scott.....	Philadelphia, Pa....	Nov. 12, 1830
Fire-proof chest, iron†.....	Charles A. Gaylor....	New York.....	April 12, 1833
Fire-proof chest.....	John Scott.....	83 Dock st. Phil'a, Pa.	July 21, 1835

* Reissued Dec. 15, 1826. † Reissued Aug. 13, 1834. ‡ Reissued April 3, 1835.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Fire-proof chest.....	James Matthews.....	New York.....	June 16, 1836
Fire-proof safe.....	Daniel Harrington....	Philadelphia, Pa....	Mar. 2, 1836
Fire-proof chests and safes, (whole title in Enos Wilder.).....	Daniel Fitzgerald....	New York.....	June 1, 1843
Fire-proof safe.....	Benjamin Sherwood....	New York.....	May 8, 1837
Fire-proof safe.....	Daniel Fitzgerald.....	Mount Morris, N.Y.	Aug. 15, 1837
Flasks and patterns for iron teakettles.....	David Stewart.....	Danville, Pa.....	June 26, 1835
Flat or sad iron, tenon and mortise attached.....	William Wilson.....	Greenfield, Mass....	Mar. 27, 1835
Forges, and bellows applied thereto	Ransom Greene.....	Brunswick, N. Y.,	May 31, 1834
Forges, and bellows for blacksmiths, &c.....	John C. Conklin.....	Peekskill, N. Y....	June 19, 1835
Forges, backs, and for other fires, &c.....	Philo C. Curtis.....	Utica, N. Y.....	Mar. 27, 1832
Forges, backs for fires, &c.*.....	Asa Graham.....	Hamilton, N. Y....	Dec. 15, 1832
Forges, backs.....	Frederick Avery.....	Hamilton, N. Y....	Feb. 12, 1833
Forges, backs.....	Timothy Bush, jr....	Springhort, N. Y....	April 12, 1833
Forges, backs.....	Luke Wilder.....	Leominster, Mass....	Mar. 17, 1838
Forges, backs, blacksmiths.....	Isaac Sawyer.....	Hallowell, Maine....	Feb. 13, 1835
Forges, backs, blacksmiths.....	James Knickerbacer....	Laporte, Ind.....	Sept. 26, 1835
Forge bellows, improvement in.....	Jeremiah Darling.....	Adrian, Mich.....	May 23, 1846
Forges, blacksmiths', bellows attached to hearth.....	Charles Foster.....	Rochester, N. Y....	May 11, 1841
Forges, blacksmiths', producing the blast for.....	Wm. & Heman W. Sharp.....	Catherine, N. Y....	Aug. 2, 1839
Forge, blacksmith.....	Charles Richardson....	Greenfield, N. H....	Mar. 12, 1836
Forges, blacksmiths'.....	Frederick A. Stuart....	Catherine, N. Y....	July 1, 1844
Forge, blacksmiths'.....	James R. Hobbs.....	Huntsville, Ala....	Sept. 15, 1846
Forge, bloomery, employed in the manufacture of wrought iron.....	Simeon Guilford.....	Lebanon, Pa.....	Dec. 27, 1843
Forges and furnaces, apparatus for blowing.....	James A. Stewart.....	Springfield, Tenn...	Aug. 18, 1840
Forges and furnaces, water-backs for.....	William McEwen.....	Norristown, Pa....	Nov. 10, 1841
Forge, and other furnaces, application of air.....	S. W. Watson, and C. Robinson.....	Ashtabula, Ohio....	Sept. 26, 1835
Forge, hearth, hot air.....	L. V. Badger and R. Walker.....	Portsmouth, N. H....	Nov. 30, 1835
Forge, or heating wind of the blacksmith's fires.....	John Howe.....	Alna, Maine.....	April 16, 1834
Forge, hollow fire.....	Samuel Collins.....	Springfield, Mass....	Sept. 11, 1822
Forge, hot-blast.....	Paul A. Sabbaton.....	Reading, Pa.....	Feb. 24, 1845
Forge, portable.....	Christian V. Queen....	Peekskill, N. Y....	Nov. 18, 1845
Forge, smith's.....	Amos Bissey.....	Point Pleasant, Pa..	June 23, 1838
Forks, manufacture of.....	Samuel H. Gilman.....	Boston, Mass.....	Oct. 16, 1845
Furnace, blacksmiths', burning anthracite.....	Edward Nichols.....	Hampden, Conn. }	Aug. 21, 1839
Furnace, blast.....	and James Augur..	New Haven, Conn }	
Furnace, blast.....	Stephen Chubbuck and J. J. Briggs.....	Wareham, Mass....	Jan. 9, 1841
Furnace, blast.....	John Steece.....	Lawrence co., Ohio..	May 16, 1833
Furnace, blast.....	Isaac Tyson, jr....	Baltimore, Md.....	April 18, 1834
Furnace, blast.....	Benjamin Kugler.....	Philadelphia, Pa....	June 2, 1836
Furnace, blast.....	John Barker.....	Baltimore, Md.....	April 20, 1837
Furnace, blast, and cupola.....	John Patterson.....	Warwick, N. Y....	June 13, 1831
Furnace, blast, draught of.....	Asahel Collins.....	Ulster, N. Y.....	Dec. 31, 1838
Furnace, blast, hearth of.....	George Poe.....	Elkridge Landing, Md	June 23, 1838
Furnace, blast, heating.....	Charles C. Alger.....	Stockbridge, Mass....	June 30, 1838
Furnace, blast, smelting iron ore.....	Thomas Gregg.....	Connellsville, Pa....	May 22, 1832
Furnace, blast, steam application	Cotton Foss.....	Madison, Ohio.....	Aug. 2, 1836
Furnace, combination of, manufacturing wrought iron directly from the ore.....	Claude S. Quilliard....	Roundout, N. Y....	Dec. 23, 1841
Furnace, combined.....	Levi Diabrow.....	New York.....	May 6, 1823

* Released February 28, 1862.

† Added imp't, Aug. 23, 1836.

‡ Antedated July 1, 1836.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHERE ISSUED.
Furnace, cupola.....	Henry Ward.....	New York.....	Dec. 31, 1831
Furnace, flues of.....	Jeremiah Chute and Jacob Seabury.....	Cohoes, N. Y.....	Dec. 5, 1831
Furnace, &c., heating*.....	C. E. Detmold, of New York, assignee of W. von Faber du Faur.	Wassersalinger, kingdom of Würtemberg.	April 16, 1842 patented in Europe May 12, 1840.
Furnace, and forge back.....	Lewis Gillet.....	Copenhagen, N. Y..	Aug. 31, 1823
Furnace, glass.—See Class 15.			
Furnace, hatters.—See Class 3.			
Furnace, heating bar iron.....	Henry Burden.....	Troy, N. Y.....	Oct. 14, 1834
Furnace, heating iron hoops.....	Garret Post.....	Auborn, N. Y.....	May 22, 1836
Furnace, heating tire.....	Dudley Marvin.....	Canandaigua, N. Y.	Jan. 21, 1831
Furnace for, and process in, making malleable iron.....	J. F. Winslow.....	Troy, N. Y.....	Mar. 15, 1846
Furnace.....	A. Ellicott and John McCrone.....	Baltimore, Md.....	May 16, 1846
	William H. Phillips..	Brooklyn, N. Y....	Aug. 28, 1840
Furnace, heating the blast of.....	Christian E. Detmold.	New York, N. Y....	July 15, 1843
Furnace, heating, for all kinds of metallurgic operations†.....	William H. Passmore	North Wayne, Me.	Oct. 7, 1846
Furnace for heating scythes.....			
Furnace, hot air.—See Class 5.			
Furnace, hot air, and cupola.....	L. V. Badger.....	Portsmouth, N. H..	Dec. 2, 1835
Furnace, iron.....	Benjamin B. Howell..	Philadelphia, Pa....	Oct. 11, 1828
Furnace, manufacture of iron....	Isaac C. Bryant.....	Philadelphia, Pa....	Dec. 31, 1838
Furnace, portable, for casting....	Joseph Share.....	Baltimore, Md.....	Mar. 30, 1813
Furnace, and pots, for melting....	Cyrus Gridley.....	Waterbury, Conn...	Mar. 17, 1838
Furnace, puddling manufacturing iron with anthracite coal‡.....	Thomas Cooper.....	New York.....	Aug. 25, 1840
Furnace, puddling and refining iron	Peter Cooper, assignee of John S. Gastin...	New York, N. Y....	Aug. 2, 1842
	John C. McManaway	Scioto, Ohio.....	June 22, 1843
Furnace, refining iron.....	James Sharp.....	Liverpool, Pa.....	June 23, 1838
Furnace, refining and melting metals.	T. and Jos. Barnhurst and William Walker	Philadelphia, Pa....	May 14, 1814
Furnace, &c., reverberatory.....	Claude S. Quilliard..	Roundout, N. Y....	Jan. 8, 1842
Furnace, reverberatory, for smelting or puddling iron.	Wm. Green, assignee of S. Broadmeadow	Woodbridge, N. J..	Jan. 6, 1844
Furnace, revolving fan-wheel for..	Frederick P. Dimpfel.	New York, N. Y....	Dec. 28, 1839
Furnace, for shear steel.....	Simeon Broadmeadow	New York.....	April 5, 1837
Furnace, smelting lead.....	A. R. Drummond and N. G. W. Fuller...	Galena, Ill.....	May 30, 1838
Furnace, smelting ore.....	Arundius Tiers.....	Kensington, Pa....	Apr. 11, 1836
Furnace, smelting ore.....	George E. Sellers....	Philadelphia, Pa....	Apr. 20, 1837
Furnace, smelting ore.....	Simeon Broadmeadow	New York.....	Apr. 5, 1837
Furnace, smelting ore.....	J. Baughman, J. Guiteau, and H. High.	Herford township, Mauch-Chunk, Pa.	May 21, 1838
Furnace, smelting ore and burning lime.....	John Owings.....	Adams county, Pa..	May 29, 1835
Furnace, smelting.....	Squire M. Fales.....	Baltimore, Md.....	May 16, 1846
Furnace, smelting iron ore.....	Augustus Roth.....	Pottsville, Pa.....	Oct. 31, 1839
Furnace, for smelting iron.....	Leman Bradley.....	Sharon, Conn.....	Nov. 18, 1844
Furnace, smelting, constructing...	Frederick C. Kropff..	Bedford county, Pa.	Jan. 17, 1842
Furnace, smelting iron.....	Jac. Van Reed Hunter	Rockland, Pa.....	July 23, 1842
Furnace, tuyeres for.....	W. W. Snow.....	Oneonta, N. Y....	May 20, 1842
Furnace, tuyeres for.....	Richard Brewer.....	Plymouth, Ohio....	Nov. 21, 1842
Furnace, tuyeres for.....	Reuben A. Goodrich..	Milford, N. Y.....	Feb. 24, 1843
Furnace, tuyeres for.....	Lorenzo D. Brown....	Lee, Mass.....	June 14, 1843
Furnace, tuyeres for.....	Lewis E. Clow.....	Mount Pelico, Vt...	Sept. 23, 1843
Furnace, tuyeres for||.....	Zadok H. Mann.....	Lowell, Mass.....	Dec. 15, 1843
Gauge, for trip hammers.....	Benjamin Richardson.	Western, Mass.....	May 17, 1814
Gold, amalgam mill for separating from ore.....	Joseph Curtis.....	New York.....	Dec. 28, 1835

* Reissued 23d Jan., 1845. † Returned Feb. 20, 1845. ‡ Returned March 18, 1844. § Antedated Dec. 2, 1842.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Gold, amalgam mill for separating from ore.....	Joseph Curtis.....	New York.....	Dec. 28, 1835
Gold, amalgam mill for separating from ore.....	Joseph Curtis.....	New York.....	Dec. 28, 1835
Gold, cleaner.....	James Bogardus.....	New York.....	April 7, 1834
Gold, extracting from ore.....	Jas. L. Montaudevert.....	Charlotte, N. C.....	April 30, 1831
Gold, extracting from ore.....	Nathaniel Bosworth..	Philadelphia, Pa.....	June 6, 1835
Gold machine, called railway car.	Oscar Willis.....	Burke county, N. C.	Dec. 21, 1831
Gold ores and alluvial auriferous earth, washing.....	John Powell.....	Salisbury, N. C.....	April 1, 1831
Gold ores and alluvial soils, washing.	V. D. Rivaflinoli, Chas. Harsleben, and William Davis.....	London, England...	Nov. 1, 1830
Gold and silver, separating from earth*.....	William H. Folger...	Charlotte, N. C.....	Feb. 13, 1828
Gold, separating and grinding....	Samuel Whistler and James Smith.....	Rockingham co., Va.	Jan. 15, 1830
Gold, separating.....	Roswell King.....	McIntosh co., Ga....	Oct. 1, 1830
Gold, separating from earths.....	Daniel Jones.....	Granville, N. C.....	Nov. 3, 1830
Gold, separating from earths.....	Frederick D. Sanno..	Philadelphia, Pa.....	Dec. 24, 1830
Gold, separating from earths.....	Green B. Palmer.....	Pendleton, N. C.....	April 23, 1831
Gold, separating and grinding flint rock.....	Adam Carson.....	Kingston, Tenn....	Jan. 29, 1833
Gold, separating from its ores, apparatus employed in†.....	Thomas Seay.....	Columbia, Ga.....	May 4, 1841
Gold, separating from soil.....	John Dobson.....	Burke county, N. C.	Aug. 21, 1834
Gold, swinging riddle.....	Oscar Willis.....	Morgantown, N. C..	Sept. 5, 1832
Gold, washer.....	Roswell King.....	McIntosh co., Ga....	Oct. 1, 1830
Gold, washing and separating....	Richard Lee.....	Erinsville, N. C....	July 8, 1829
Gold, washing and separating.....	William H. Folger...	Charlotte, N. C.....	Sept. 10, 1829
Gold, washing and separating alluvial.....	Thomas W. A. Sumter	Poplar Grove, N. C.	May 22, 1830
Gold, washing from gravel and sand	Peter Summey.....	Lincoln, N. C.....	Jan. 30, 1830
Gold, washing from gravel and sand	Christopher Bechtler..	Rutherfordtown, N. C.	Oct. 5, 1831
Gold, washing from sand and pounded ore.....	Christopher Bechtler..	Rutherfordtown, N. C.	Oct. 5, 1831
Gold, washing.....	Thomas Rives, sen...	Halt county, Ga....	Feb. 3, 1832
Gold, washing.....	William Davis.....	Fauquier county, Va	Nov. 22, 1832
Gold, washing.....	Peter L. Dauvergne..	Clarksville, Ga.....	Sept. 17, 1842
Gold, washing.....	Henry Bourne.....	Elberton, Ga.....	Sept. 14, 1843
Gauges, making.....	M. M. Brainard.....	G. Barrington, Mass.	March 4, 1836
Grinding edge tools.....	F. Marby, for Geo. A. Madeira.....	Chambersburg, Pa..	April 19, 1832
Grinding ores into powder.....	Henry Alexander.....	Baltimore, Md.....	Oct. 27, 1813
Grinding tools, hammers.....	Daniel Welsh.....	Canaan, N. H.....	Jan. 10, 1833
Guards to cap-spinners.....	William Cundell.....	Patterson, N. J.....	Nov. 10, 1846
Hammer, arm forge.....	James Sharp.....	Polaraine, Pa.....	June 14, 1834
Hammer, cast iron.....	Thomas Jones.....	Glastonbury, Conn.	July 31, 1833
Hammer, hanging forge.....	Jonathan McNeel...	Coleman t'nsnip, Pa.	Jan. 21, 1829
Hammer, hatchet.....	Joel Howe.....	Princeton, Mass....	July 8, 1834
Hammers and hatchets, socket of.	Phineas Eastman.....	Canaan, N. H.....	July 17, 1839
Hammer, for nails.....	Charles A. Strong....	S. Glastonbury, Ct.	March 3, 1829
Hammer, spikes, gimblets, &c., sharpening.....	Ezra L'Hommedieu..	Saybrook, Conn....	April 28, 1830
Hammer, stone.....	Galen H. Pierce.....	Middlebury, Mass..	Dec. 17, 1834
Hammer, swedge spring.....	William Field.....	N. Providence, R. I.	Sept. 14, 1833
Hammer, working forge.....	George Escot Sellers..	Cincinnati, Ohio...	Jan. 10, 1845
Hammers.....	Solomon Anderson...	Garrettsville, N. Y.	Aug. 20, 1845
Harpoons.—See Class 22.			
Hearth, blacksmith or forge.....	Joseph Lauback.....	Middletown, Pa....	Nov. 10, 1841
Hinges.....	David Morse.....	Massachusetts.....	June 10, 1803
Hinges, butt.....	Hy. P. Anderson and Josiah Sawyer.....	Waterford, N. Y....	June 18, 1833

* Renewed Nov. 18, 1829.

† Antedated May 9, 1841.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Hinges, butt.....	Darwin Ellis	Attleborough, Mass.	Aug. 8, 1834
Hinges, butt.....	Welcome Whittaker..	Troy, N. Y.....	Mar. 12, 1836
Hinges, butt.....	Charles R. Macey....	Hyde Park, N. Y...	Oct. 5, 1836
Hinges, butt*.....	Jonas Rouse.....	Troy, N. Y.....	May 17, 1836
Hinges, or butt, double centred joints.....	Egbert Hedge.....	Hartford, Ct.....	Nov. 23, 1837
Hinges, butt, mould for cutting..	Jonas Kendall, jr....	Watertown, Mass..	July 21, 1831
Hinges, butt, table.....	Humphrey Treadwell.	Hyde Park, N. Y..	Dec. 31, 1833
Hinges, butt blanks, machinery for trimming.....	Cyrus Kenney.....	Troy, N. Y.....	July 26, 1844
Hinges, butt, casting	Richard W. Belson...	Danville, Pa.....	July 26, 1843
Hinges, butt, forming the eyes of.	J. F. Winslow, ass'ee of W. Whittaker...	Troy, N. Y..... } Albany, N. Y..... }	July 8, 1843
Hinges or butts, for hanging and fastening window blinds and shutters.....	Augustus C. Palmer..	Utica, N. Y.....	Jan. 27, 1843
Hinges, butt, moulds for.....	Benj'n F. Harley & J. D. Morris.....	Philadelphia, Pa....	Feb. 12, 1844
Hinges, butt, planing and dressing the knuckles on their inner sides.....	Gage Stickney.....	Blackwoodtown, N.J	Dec. 19, 1844
Hinges, butt, wrought iron, bending the knuckles of.....	Cyrus Kenney.....	Troy, N. Y.....	Aug. 23, 1844
Hinges, butt, wrought iron, machinery for making.....	Cyrus Kenney.....	Troy, N. Y.....	Aug. 7, 1844
Hinges, butt, &c., casting of iron, brass, &c.....	Wm. H. Carr, ass'ee of Thos. Shepherd..	Philadelphia, Pa....	Oct. 9, 1841
Hinges, cast.....	George A. Rodgers...	Newburyport, Mass	July 3, 1810
Hinges, cast iron.....	Cyrus Alger.....	Boston, Mass.....	May 18, 1814
Hinges, casting.....	David Stuart and Chas. C. Lloyd.....	Danville, Pa.....	Jan. 20, 1843
Hinges, casting on to their axis†.	Samuel Wilkes.....	Darleston, Gt. Britain	Apr. 10, 1841
Hinges, elliptical.....	Mark & R. Reeve....	Burlington, N. J....	Oct. 31, 1812
Hinges for fastening blinds and shutters.....	Robert B. Varden....	Baltimore, Md.....	Feb. 12, 1845
Hinges, flask for moulding.....	Thomas Loring.....	Gloucester, N. J....	Feb. 7, 1844
Hinges, friction roller.....	John Bailey, jr.....	Plymouth, Mass....	May 16, 1808
Hinges, helical spring joint.....	D. A. Hoyt & P. W. Bulkeley.....	Danbury, Ct.....	April 28, 1838
Hinges of piano fortes.....	J. Chickering, ass'nee of R. Porter.....	Boston, Mass.....	June 3, 1843
Hinges and tubes.....	William Shaw.....	Buffalo, N. Y.....	Oct. 22, 1835
Hinges, window blind, and fastenings.....	William Baker.....	Utica, N. Y.....	Sept. 17, 1842
Hoes, manufacturing.....	Isaac Hinman	Hamden, Ct.....	April 22, 1835
Hoe necks, swages, dies, &c., for manufacturing.....	Nathan Brand.....	Leonardsville, N. Y.	April 1, 1845
Hone, metallic.....	John Houston.....	Williamsburg, Va..	May 4, 1805
Hooks and eyes.....	James Stewart.....	Boston, Mass.....	July 20, 1831
Hooks and eyes, for fastening garments.....	Charles Atwood.....	Derby, Ct.....	Feb. 24, 1843
Hooks for fishing, connecting....	Engelbrecht & Skiff..	Philadelphia, Pa....	July 28, 1846
Horse shoes, chain links, &c., machine for forming.	Thos. F. Winslow & Thos. Osgood.....	Troy, N. Y.....	Aug. 11, 1843
Horse shoes, machine for making	Henry Burden.....	Troy, N. Y.....	Sept. 14, 1843
Horse shoes, machinery for mak'g	William Gibson.....	Troy, N. Y.....	Sept. 27, 1843
Horse shoes, for the relief & cure of hoof-bound horses.....	Daniel Homer.....	Alton, Ill.....	April 16, 1842
Iron, bending for steam boilers..	Calvin Post.....	Springport, N. Y..	Mar. 11, 1828
Iron, borings, drillings, &c., in furnaces.....	Maynadier Mason....	Georgetown, D. C..	Nov. 8, 1831
Iron, carbonating and smelting...	Asa Whitney.....	Southfield, N. Y....	July 17, 1837
Iron, casting.....	William Hancock.....		Feb. 26, 1799

* Reissued August 9, 1845.

† Antedated Dec. 10, 1840.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Iron, cast, uniting with steel or wrought iron.....	A. Mallory & C. Miles	Concord, Ohio.....	Aug. 1, 1831
Iron and copper, coating with tin and other metals.	Edmund P. Morewood	Great Britain, now in New York.....	Sept. 17, 1844
Iron, cutting, punching, & slitting Iron, &c., forging.—See <i>Striker</i> .	John V. Buskark....	Norwalk, Ohio.....	April 6, 1833
Iron, &c., forging, stamping, and cutting; machinery operated by steam.*	James Nasmyth, ass'or to Merrick & Town.	Great Britain.....	June 9th, '42, England; Apr. 10, '43, America.
Iron, hoop, straightening.....	Benjamin Seymour...	Massachusetts.....	June 26, 1797
Iron, hoop and sheet.....	Jeremiah H. Pierson..	New York.....	Dec. 24, 1807
Iron, malleable.....	B. B. Howell.....	Philadelphia, Pa....	Nov. 6, 1828
Iron, malleable, from pig.....	Thomas C. Lewis.....	Pittsburg, Pa.....	Oct. 1, 1830
Iron, malleable, cast.....	Seth Boyden.....	Newark, N. J.....	Mar. 9, 1831
Iron, malleable, cast.....	Seth Boyden.....	Newark, N. J.....	April 6, 1831
Iron, manufacturing.....	James Rutland.....	Philadelphia, Pa....	Nov. 12, 1807
Iron, manufacturing.....	Norman Callender...	Cumberland co., Pa.	Dec. 14, 1832
Iron, manufacturing.....	George Crane.....	London, England...	Nov. 29, 1838
Iron, puddling and heating.....	William Jones.....	Haverstraw, N. Y....	Dec. 16, 1833
Iron, ore, separating.....	Joseph Goulding.....	Reesville, N. Y.....	July 18, 1832
Iron, ore, smelting.....	Thomas R. Ridgway...	Pottsville, Pa.....	Dec. 17, 1834
Iron, ore, smelting.....	Joseph Lyon.....	Pottsville, Pa.....	July 31, 1837
Iron, ore, smelting.....	Joseph Richards.....	Philadelphia, Pa....	Dec. 10, 1836
Iron ores, art of smelting, and in certain furnaces applicable thereto.....	Charles Sanderson....	Sheffield, England..	Feb. 9, 1841
Iron or other ores, process of reducing to the metallic state, by coating them with certain fluxes	Jonas Tower.....	Madison, Ohio.....	Dec. 7, 1844
Iron, &c., punching holes in, machine for.	A. Hammond, ass'nee of W. Adams and A. Hammond.....	Boston, Mass.....	May 8, 1843
Iron, sheet, manufacturing.....	J. Wood, sen., John Wood, and Wm. B. Wood.	Del. iron works, Wilmington, Delaware.	Oct. 12, 1842
Iron, sheet, manufacturing.....	Simeon Guilford.....	Lebanon, Pa.....	Oct. 22, 1842
Iron, sheet or plate, bending.....	John Watchman.....	Baltimore, Md.....	June 1, 1843
Iron, slitting.....	Jesse Reed.....	Marshfield, Mass....	April 21, 1825
Iron, softening, cast or crude.....	A. Scott & A. Selden.	Winchester, N. H....	Nov. 8, 1814
Iron, splaying or flaring.....	Noah Sutton.....	New York.....	April 28, 1825
Iron and steel, by anthracite coal.	F. W. Geissenhainer...	New York.....	Dec. 19, 1833
Iron and steel, making.....	William P. Boyden...	New York.....	June 11, 1836
Iron and steel, rolling.....	Rufus W. Bangs & S. D. Walbridge.....	Bennington, Vt.....	Dec. 31, 1833
Iron and steel, process of manufacturing.	Thos. Southall and C. Crudgington.	Kidderminster, Eng.	Feb. 8, 1844, England; Sep. 14, 1844, U. S. A.
Iron, &c., washing ores.....	Frederick Fredly.....	Logan township, Pa	April 20, 1837
Iron, wrought, from the ore, mode of obtaining.....	S. Broadmeadow.....	New York.....	May 30, 1844
Joints for ruls, double centred...	Lemuel Hedge.....	Hartford, Ct.....	April 29, 1837
Key hole of door and other locks, closing and opening.....	David Evans.....	Philadelphia, Pa....	July 10, 1841
Knife, or fleshier, tempering.....	John Glenn.....	Champaign co., O....	April 24, 1834
Knife, saw.....	Lorenzo Graham.....	Paris, N. Y.....	July 29, 1834
Knife, sharpener.....	Isaiah Jennings.....	New York.....	Mar. 17, 1829
Knife, sharpener.....	William J. Dunn.....	New York.....	Aug. 18, 1829
Knife, sharpener, and domestic guard.....	Walter Hunt.....	New York.....	Feb. 19, 1829
Knife, sharpener, domestic.....	Philip Cornell.....	Brutus, N. Y.....	Jan. 15, 1830
Knives and forks, table.....	George Ropes.....	Portland, Me.....	May 10, 1838

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Knives and forks, cleaning and polishing.....	Martin N. Armstrong.	New York.....	Sept. 14, 1843
Knives, &c., machine for polishing	William Vine.....	New York, N. Y....	Dec. 5, 1846
Knobs, door, to their spindles, method of attaching.....	Enoch Robinson.....	Boston, Mass.....	Jan. 10, 1843
Knob, door, of clay.—See Class 15.	Francis Draper.....	E. Cambridge, Mass	Sept. 10, 1840
Knob, door, of glass.....	John G. Hotchkiss, & J. A. Davenport, and John A. Quincy.....	New Haven, Ct... New York..... New York.....	Nov. 16, 1841
Knob, door, of glass, attaching } necks, &c., to.....	George O. Russell.....	Middletown, Ct....	Oct. 7, 1845
Knobs for doors.....	David Hottman.....	Baltimore, Md.....	July 31, 1837
Knobs, door, drawer, commode, &c.....	Spencer Richards.....	Cambridge, Mass...	Oct. 31, 1831
Knobs, glass.....	Theodore T. Abbot..	Canton, Mass.....	Nov. 19, 1833
Knobs, glass.....	Alfred C. Hobbs, and Wm. S. Thompson.	Boston, Cambridge, Mass.....	May 20, 1842
Knobs, glass, commode.....	Elijah Skinner.....	Sandwich, N. H....	June 11, 1839
Knobs, glass, for doors, &c.....	Henry Whitney & E. Robinson.....	Cambridge, Mass...	Nov. 4, 1836
Knobs, glass, (improvement on Bakewell's).....	T. B. & J. P. Bakewell	Pittsburgh, Pa.....	May 14, 1838
Knobs, glass, manufacturing.....	Deming Jarves.....	Boston, Mass.....	Oct. 19, 1836
Knobs, glass, &c., for doors, &c.	E. Robinson, F. Draper, & J. H. Lord.	Cambridge & Boston, Mass.....	Oct. 20, 1836
Knobs, glass, &c., for doors, &c.*	E. Robinson, F. Draper, & J. H. Lord..	Cambridge & Boston, Mass.....	Dec. 2, 1836
Knobs, glass to metallic sockets, attaching.....	E. Robinson & G. W. Robinson.....	Boston, Mass.....	Oct. 20, 1837
Knobs, glass, mode of fastening..	William Price.....	Pittsburgh, Pa.....	Nov. 14, 1836
Knobs, glass, pressed at one operation.....	John Robinson.....	Pittsburgh, Pa.....	Oct. 6, 1827
Knobs, glass and screws, manufacturing.....	Deming Jarves.....	Boston, Mass.....	June 13, 1839
Knobs, screw for glass.....	Orrin Newton.....	Pittsburgh, Pa.....	Oct. 17, 1835
Labels for mail bags.....	Oren S. North.....	New Britain, Ct....	Mar. 13, 1844
Latch, door.....	Henry Duntze.....	New Haven, Ct....	July 6, 1839
Latch, door.....	Ben'j M. Bosworth..	Warren, R. I.....	Mar. 6, 1840
Latch, door.....	Oliver Judd.....	Cherry Valley, N.Y	Dec. 10, 1840
Latch, door.....	James M. Hoggan....	New Haven, Ct....	Nov. 25, 1841
Latch, door and other locks.....	E. Robinson & W. Hall	Boston, Mass.....	Mar. 3, 1841
Latch of door locks.....	John P. Sherwood....	Sandy Hill, N. Y...	May 6, 1841
Latches for doors.....	Jacob Alrich.....	Wilmington, Del...	May 24, 1845
Latch, door, right and left.....	Miles Greenwood, as'e of G. E. Sellers.....	Cincinnati, Ohio...	May 7, 1842
Latch or fastener, for window shutters and blinds.....	Arundel Hill.....	Steubenville, Ohio..	Feb. 24, 1843
Latch, knob for doors, &c.....	L. & W. Hotchkiss..	Derby, Ct.....	Mar. 6, 1840
Latch and lock, gravitating, combined, for doors.	Miles Greenwood, as'e of G. E. Sellers.....	Cincinnati, Ohio...	May 12, 1842
Latch and lock, for doors.....	Albert Bingham.....	Unity, Me.....	July 7, 1835
Latch, mortise.....	William Coover.....	Erie, Pa.....	Feb. 17, 1836
Latch, mortise.....	Charles S. Gay.....	Nashua, N. H.....	Sept. 28, 1837
Latch, mortise.....	David N. Ropes.....	Portland, Me.....	Sept. 28, 1837
Latch, mortise for doors.....	William Wilson.....	Northampton, Mass.	Nov. 26, 1844
Latches, mortise, door.....	Rhodolphus Kingsley.	Springfield, Mass...	Mar. 7, 1846
Latches, night, improvement in..	Amos Call.....	Springfield, Mass...	Mar. 7, 1846
Latches, fastening.....	Livingston, Roggan, & Adams.....	Pittsburgh, Pa.....	Nov. 24, 1846
Latch, Norfolk.....	Harlow Isbell.....	Meriden, Ct.....	Nov. 8, 1834
Latch, Norfolk.....	Harlow Isbell.....	Meriden, Ct.....	Nov. 8, 1834
Latch, thumb, for doors.....	Edmund Parker.....	Meriden, Ct.....	Mar. 28, 1842
Latch, thumb.....	Philos, Eli W., & John A. Blake.....	New Haven, Ct....	July 21, 1840

* Antedated September 20, 1836.

† Diechimer, Aug. 25, 1840.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Laths, metallic, for fire-proof ceilings of houses.....	Palmer Summer.....	New York, N. Y....	April 25, 1844
Lead, tinned, sheet.....	Thomas Ewbank.....	New York.....	May 30, 1833
Locks.....	William Pie.....	New York.....	Aug. 5, 1813
Locks.....	William Pie.....	New York.....	April 28, 1818
Locks.....	Henry & Jac. Day....	New York.....	April 4, 1830
Locks.....	Eb. Leman, jr.....	Boston, Mass.....	Nov. 28, 1822
Locks.....	Richard Wilcox.....	New York.....	April 20, 1824
Locks.....	John Brown, & Geo. W. Robinson.....	Providence, R. I....	Feb. 20, 1827
Locks.....	Truman Bartholomew.	New York.....	April 3, 1829
Locks.....	George A. Rogers.....	Augusta, Me.....	Jan. 20, 1830
Locks.....	Simon Pettis.....	Bellows Falls, Vt....	July 12, 1834
Locks.....	P. P. Quimby.....	Belfast, Me.....	May 22, 1836
Locks, balance pendulum.....	Richard Gaines.....	Georgetown, D. C....	Mar. 17, 1806
Locks, bank vault.....	J. Perkins.....	Newburyport, Mass..	Mar. 23, 1813
Locks and bolts, for sliding doors	Thomas Whaley.....	New York.....	Nov. 2, 1821
Locks and bolts.....	Henry C. Howells....	Putnam, Ohio.....	Feb. 10, 1834
Locks for carriages & other doors	James Ives.....	Hamden, Ct.....	July 20, 1846
Locks, combination safety, for doors, &c.	Linus Yale & Charles Wilson.....	Springfield, Mass...	Oct. 20, 1843
Locks, construction of.....	Robert Newell.....	New York, N. Y....	June 14, 1843
Lock and double catch bolts....	Conrad Leibrich.....	Philadelphia, Pa....	Oct. 5, 1839
Lock, door.....	Andrew Wolfe.....	Pittsburg, Pa.....	April 18, 1831
Lock, door*.....	James Kyle.....	Ramapo, N. Y.....	May 18, 1832
Lock, door.....	James Kyle.....	Ramapo, N. Y.....	Sept. 16, 1833
Lock, door.....	John Dillingham.....	Turner, Me.....	June 2, 1825
Lock, door.....	W. Parr & J. T. Fowler	New York.....	Nov. 19, 1833
Lock, door.....	Solomon Andrews....	Perth Amboy, N. J...	Jan. 11, 1836
Lock, door.....	Abel Conant.....	Lowell, Mass.....	Mar. 12, 1836
Lock, door.....	James McClory.....	New York.....	Mar. 18, 1836
Lock, door.....	Benjamin Smith.....	Canton, Ct.....	April 13, 1836
Lock, door.....	Almon Roff.....	New York.....	July 1, 1836
Lock, door.....	James McClory.....	New York.....	July 2, 1836
Lock, door.....	Turner Whitehouse....	Boston, Mass.....	Sept. 8, 1837
Lock, door.....	Turner Whitehouse....	Boston, Mass.....	June 14, 1838
Lock, door.....	Daniel Ball.....	Kingsbury, N. Y....	July 12, 1838
Lock, door.....	James McClory.....	New York.....	June 14, 1837
Lock, door.....	Robert Wilson.....	Burdett, N. Y.....	May 10, 1838
Lock, door.....	Erastus Finney.....	Cleveland, Ohio....	June 18, 1839
Lock, door.....	Peter Rogers.....	Philadelphia, Pa....	Sept. 25, 1840
Lock, door.....	John P. Sherwood....	Sandy Hill, N. Y....	Dec. 17, 1842
Lock, door.....	George Oates.....	Charleston, S. C....	Sept. 2, 1845
Lock, door.....	John H. Davis.....	Lumberville, Pa....	Mar. 7, 1846
Lock, door.....	Linus Yale.....	Springfield, Mass...	June 13, 1844
Locks, door and other.....	Wm. & J. N. Tuttle, ass'ees of Charles F. Voorhies.....	Newark, N. J.....	June 9, 1843
Lock, door, for banks.....	James McClory.....	New York city.....	June 19, 1838
Lock, door, escutcheon, &c.....	P. Blake, E. W. Blake, & John A. Blake....	New Haven, Ct.....	Dec. 31, 1833
Lock, door, and other fastenings.	J. R. Campbell and H. C. Campbell.....	Charlestown, Mass..	Dec. 28, 1835
Lock, door, &c., alarm.....	David Edwards.....	McConnellsville, O..	Aug. 12, 1840
Lock, door, &c.....	August Prutzman....	Philadelphia, Pa....	Sept. 5, 1840
Lock, door, combined snail-wheel lock.....	Solomon Andrews....	Perth Amboy, N. J...	Feb. 12, 1841
Lock, door and key.....	Wm. M. Williams.....	England.....	Dec. 1, 1840
Lock, door and latches.....	Nathan & Caleb Hunt	Cleveland, Ohio....	July 29, 1839
Lock, door and latches.....	George W. Wilson....	Nashua, N. H.....	June 11, 1841
Lock, door, bank, safes, &c.....	M. R. Stephenson and O. Edwards.....	Boston, Mass.....	April 17, 1844
Lock, door, bank, safes, &c.....	M. R. Stephenson and O. Edwards.....	Boston, Mass.....	July 9, 1844

* Reissued Sept. 16, 1833.

† New patent, Sept. 30, 1841.

‡ Additional improvement, Jan. 14, 1844.

INVENTIONS OR DISCOVERIES:	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Lock, door, combination.....	Sabin Colton	Philadelphia, Pa....	Jan. 6, 1844
Lock, door, combination.....	M. R. Stephenson and O. Edwards	Boston, Mass.	April 17, 1844
Lock, door, combination.....	Robert Newell.....	New York, N. Y.	Sept. 17, 1844
Lock, door, combination tumbler.	Robert M. Tuttle.....	Newark, N. J.	Dec. 5, 1842
Lock, door, permutation.....	J. B. Gray.....	Fredericksburg, Va.	Sept. 18, 1841
Lock, door, permutation for vaults, safes, &c.....	Darius W. Maples...	Geneva, N. Y.	Dec. 4, 1844
Lock, door, safety*.....	William Stillman.....	Westerly, R. I.	Sep. 14, 1839
Lock, door, or spring catch	Robert J. Byram.....	Boston, Mass.	May 31, 1832
Locks, door and trunks.....	Asa Beals.....	Exeter, N. H.	Jan. 26, 1830
Lock and key, door.....	Godfried M. Zahm.....	Lancaster, Pa.	May 26, 1842
Locks and keys.....	Angus McKennon.....	New York.....	Aug. 16, 1845
Locks and keys.....	William Wilson.....	Northampton, Mass.	Jan. 27, 1843
Lock and latch combined.....	Rhodolphus Kingsley.	Springfield, Mass.	April 16, 1845
Locks, Egyptian.....	A. O. Stansbury.....	New York.....	Feb. 11, 1807
Lock for banks and safes, &c....	John Oxnard.....	Portland, Me.	April 10, 1845
Lock for banks and safes, &c....	William Hall.....	Boston, Mass.	Oct. 16, 1845
Locks for doors, safes, &c.....	David M. Smith.....	Springfield, Vt.	July 14, 1846
Locks for doors of bank vaults...	J. L. Whetstone.....	Cincinnati, Ohio....	July 20, 1846
Locks, for safes, bank vaults, &c.	William Hall.....	Chelsea, Mass.	Aug. 17, 1843
Lock for safes, &c.....	Henry Isham.....	Montpelier, Vt.	Nov. 12, 1845
Lock for vaults, &c.....	Henry C. Jones.....	Newark, N. J.	April 26, 1845
Lock, improved, for doors, &c....	James Atwater.....	New Haven, Conn....	July 24, 1846
Locks, knob, spiral spring.....	James Patterson.....	Pittsburgh, Pa.	Oct. 19, 1829
Locks, and latch.....	H. Durkee, assignee of J. Chittenden.....	Burlington, Vt.	Aug. 12, 1820
Locks, and latch, for doors.....	Joel F. Thayer.....	Boston, Mass.	May 18, 1822
Locks or latch for doors.....	William Hale.....	Chelsea, Mass.	Oct. 18, 1843
Locks or latch for doors.....	Theodore L. Littlefield	Philadelphia, Pa.	Nov. 21, 1843
Locks or latch for doors, compound lever gravitating	Rodolphus Kinsley, as- signe of Samuel Noyes	Springfield, Mass. }	Feb. 20, 1843
Lock or latch, check bolt of {	Albert Bingham.....	Beverly, Mass. }	Oct. 17, 1842
Lock and latch knobs, fastening to their spindles, &c.....	Andrew O. Downer...	Utica, N. Y.	Dec. 21, 1842
Locks, and lever key.....	Augustus Prutzman...	Philadelphia, Pa.	Mar. 4, 1836
Locks, manifold permutation...	Robert Newell.....	New York city.....	Sep. 25, 1838
Locks, manufacturing.....	James Menely.....	Watervliet, N. Y.	Jan. 12, 1832
Locks, mortise.....	Turner Whitehouse...	Boston, Mass.	Sept. 29, 1825
Locks, mortise, and latch.....	J. G. Hotchkiss.....	New Haven, Conn....	June 19, 1835
Locks, mortise.....	P. and E. W. Blake...	New Haven, Conn....	Feb. 5, 1836
Locks, mortise.....	Leonard Foster.....	Boston, Mass.	June 27, 1838
Locks, mail bag, and clasp.....	Henry C. Jones.....	Newark, N. J.	Oct. 23, 1837
Locks, perplexing.....	J. C. L. Danbreville...	Ramapo, N. Y.	Mar. 13, 1833
Locks, permutation lever.....	F. B. Pye.....	New York, N. Y.	Mar. 7, 1846
Locks, permutation.....	J. H. Butterworth...	Dover, N. J.	April 11, 1846
Lock, safe.....	W. E. Woodbridge...	New York, N. Y.	July 14, 1846
Locks, safety.....	Zibeeon Wilbur.....	Woodbury, Conn....	Dec. 23, 1834
Locks, saving, for drawers.....	Elijah Skinner.....	Sandwich, N. H.	April 13, 1830
Locks, securing from being pick'ed	George W. Robinson...	Attleborough, Mass.	July 17, 1818
Locks, secret, safety.....	William Hobbs.....	Springfield, Mass.	Dec. 20, 1827
Locks, spiral spring.....	Nathan Reed.....	Belfast, Maine.....	Mar. 31, 1828
Locks, spiral spring, latch bolt...	Abraham Blauvelt...	N'w Brunswick, N.J.	Feb. 9, 1825
Locks, trunk.....	Joseph Nock.....	Philadelphia, Pa.	Oct. 10, 1838
Locks, trunk, &c.....	Henry C. Jones.....	Newark, N. J.	Dec. 15, 1838
Locks, union.....	William Pie.....	New York.....	April 28, 1818
Locks, wire spring for.....	Job Baker.....	New Bedford, Mass.	Oct. 1, 1830
Locking number of drawers.....	Edward Brown.....	Lynchburg, Va.	Oct. 28, 1835
Melting metals and ores.....	Daniel Walworth.....	Middletown, Conn....	May 27, 1814
Melting metals.....	Joseph Walworth.....	New York.....	Oct. 17, 1809
Metallic cores for pipe boxes....	John Huntington.....	Zanesville, Ohio....	Feb. 24, 1845
Metallic compositions, machine for moulding.....	F. N. Still.....	Buffalo, N. Y.	Oct. 7, 1846

* Antedated March 14, 1839.

† Retissued July 6, 1843.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Metallic frame for neck stocks— <i>See class 21.</i>			
Metallic plates, punching holes in.	A. H. Teeple.....	New York, N. Y....	Aug. 28, 1846
Metallic substances, cutting.....	John H. Hall.....	Harper's Ferry, Va.	Mar. 7, 1827
Metallic surfaces, particularly saw plates, grinding and polishing..	Richard M. Hoe.....	New York, N. Y....	May 30, 1842
Metallurgical operations.....	Richard Willcox.....	Patterson, N. J....	April 5, 1831
Metallurgical operations, with an- thracite coal.....	Richard Willcox.....	Patterson, N. J....	April 5, 1831
Metallurgical operations, with bi- tuminous coal, charcoal, &c....	Richard Willcox.....	Patterson, N. J....	April 5, 1831
Metallurgy.....	John L. Sullivan.....	New York.....	Aug. 19, 1834
Metal, bending— <i>See class 9, Roof- ing.</i>			
Metal, forging, drawing, or form- ing spindles, &c., in	John Miller & Ebene- zer M. Door, assign- ees of Wm. Ryder.....	Clarksville, Mass. } Great Britain.	Feb. 8, 1841 in Eng.; Aug. 26, 1843, U.S. of America.
Metal, manufacture of.....	Arthur Wall.....	Poplar, Blackwall, G. Britain.....	Nov. 18, 1843 Eng.; Aug. 10, 1844, U.S. A.
Metal, method of making patterns for casting hollow ware, &c....	Ezra Ripley.....	Troy, N. Y.....	Aug. 31, 1844
Metal, plates or sheets of, cutting.	Mahlon Gregg.....	Wilmington, Del....	April 1, 1842
Metal, preparing, for being manu- factured into wire.....	Thomas Wallace.....	Derby, Ct.....	July 20, 1843
Metal, rolling.....	Benjamin Norton....	Boonton, N. J.....	Sept. 26, 1846
Metal, sheet, cutting into oval shapes.....	Samuel Hall.....	New York, N. Y....	Nov. 18, 1846
Metal, sheet cutting.....	Andrew Tracy.....	Poughkeepsie, N. Y.	July 17, 1841
Metal, sheet, machin'y for work'g	Orrin and Noble Peek..	Southampton, Ct...	April 25, 1843
Metals or ores, composition used in the fusion.....	Henry B. Chew and E. V. Freeman.....	Baltimore, Md.....	April 7, 1829
Metals, alternate expansion and contraction— <i>See Power, 13th class</i>			
Monuments, memento plates, cast- ing.....	Henry Liebenau.....	New York.....	Nov. 17, 1830
Moulds for casting boxes.....	Leonard Tazewell....	Lancaster, Mass....	Mar. 5, 1810
Moulds, for casting boxes.....	Samuel Smith, 2d....	Amherst, Mass.....	July 6, 1810
Moulds for casting butt-hinges...	Thomas Shepherd and Thomas Lorin.....	Philadelphia, Pa....	Mar. 16, 1841
Moulds, casting trundle heads...	Eb. Lester.....	Little Falls.....	Feb. 12, 1807
Moulds, casting iron, brass, &c...	John Leonard, jr., J. S. Brainard & Am. Sizer	Wallingford, Conn..	Jan. 28, 1830
Moulds, for running boxes.....	Samuel Smith, 2d....	Amherst, Mass.....	Oct. 17, 1809
Nails, brads, &c., cutting.....	Geo. W. Strong and Jonathan Dodge, as- signees of Walt Hunt	New York.....	Nov. 13, 1840
Nails, cutting.....	Josiah O. Pearson....	New York.....	Mar. 23, 1794
Nails, cutting.....	Jacob Perkins.....	Boston, Mass.....	Jan. 16, 1795
Nails, cutting.....	Peter Cliff.....	Massachusetts.....	Nov. 16, 1796
Nails, cutting.....	Amos Whittemore....	Massachusetts.....	Nov. 19, 1796
Nails, cutting.....	Daniel French.....	Connecticut.....	Dec. 23, 1796
Nails, cutting.....	Edward West.....	Kentucky.....	July 6, 1802
Nails, cutting.....	Nicholas Boureau....		Aug. 21, 1804
Nails, cutting.....	Fred. W. Geisenheiner	Plymouth, N. H....	Dec. 22, 1804
Nails, cutting.....	Jonathan Hicks.....	Hadley, Mass.....	Jan. 28, 1808
Nails, cutting.....	Luther Bissel.....	Hartwick, N. Y....	June 27, 1809
Nails, cutting.....	Briggs R. Reed.....	Danvers, Mass.....	Mar. 8, 1810
Nails, cutting.....	Henry Latgen.....	Marietta, Pa.....	Sept. 8, 1813
Nails, cutting.....	Richard Moore.....	Lycoming, Pa.....	Jan. 13, 1814
Nails, cutting.....	Roswell Noble.....	Baltimore, Md.....	Dec. 17, 1816

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Nails, cutting and heading.....	Isaac Garretson.....	Pennsylvania.....	Nov. 16, 1796
Nails, cutting and heading.....	George Chandler.....	Maryland.....	Dec. 12, 1796
Nails, cutting and heading.....	James Spence.....	New York.....	Feb. 16, 1797
Nails, cutting and heading.....	Jesse Kersey.....	Pennsylvania.....	Feb. 24, 1797
Nails, cutting and heading.....	Jonathan Neville.....	Massachusetts.....	Aug. 12, 1797
Nails, cutting and heading.....	Nathan Read.....	Massachusetts.....	Jan. 28, 1798
Nails, cutting and heading.....	Frederick Young.....	New York.....	Aug. 23, 1800
Nails, cutting and heading.....	Edward West.....	Kentucky.....	July 6, 1802
Nails, cutting and heading.....	Jesse Reed.....	Boston, Mass.....	Feb. 22, 1807
Nails, cutting and heading.....	Elisha Bigelow.....	Baltimore, Md.....	April 1, 1807
Nails, cutting and heading.....	Simon Willard.....	Hudson, N.Y.....	Nov. 30, 1807
Nails, cutting and heading.....	Briggs R. Reid.....	Salem, Mass.....	Aug. 18, 1810
Nails, cutting and heading.....	Jesse Reed.....	Kingston, Mass.....	Sept. 16, 1810
Nails, cutting and heading.....	William Miller.....	New York.....	Sept. 26, 1810
Nails, cutting and heading.....	Jesse Reed.....	Kingston, Mass.....	Nov. 14, 1811
Nails, cutting and heading.....	Josiah White.....	Philadelphia, Pa.....	Jan. 11, 1812
Nails, cutting and heading.....	Mark & Richard Reeve.....	Philadelphia, Pa.....	April 16, 1813
Nails, cutting and heading.....	Samuel Rogers.....	Bridgewater, Mass.....	Oct. 21, 1814
Nails, cutting and heading.....	Jesse Reed.....	Hanover, Mass.....	Oct. 22, 1814
Nails, cutting and heading.....	Nathan Elgar.....	York, Pa.....	July 25, 1815
Nails, cutting and heading.....	Isaac Northrop.....	Oneida co., N. Y.....	Jan. 7, 1817
Nails, cutting and heading.....	Jesse Reed.....	Marshfield, Mass.....	April 21, 1825
Nails, cutting and heading.....	Emerald Mason.....	Milton, Vt.....	June 6, 1832
Nails, cutting, and rolling iron...	Jesse Reed.....	Kingston, Mass.....	April 15, 1809
Nails, cutting, and rolling iron...	Samuel Rogers & Melville Otis.....	Massachusetts.....	Dec. 7, 1803
Nails, cutting, rolling, and plating.	Stephen Couch & Asa Towne.....	Boston, Mass.....	Nov. 21, 1808
Nail cutting machine, feeder for..	Caleb Isbister.....	Allegheny, Penn.....	Dec. 31, 1844
Nails, cutting, machinery for...	Frederick J. Ayers.....	Roxbury, Mass.....	July 2, 1842
Nails, cutting, vibrating machine.	Ebenezer A. Lester.....	Herkimer, N. Y.....	April 2, 1814
Nails, cutting, vibrating plates for	Jos. Bernard.....	Troy, N. Y.....	April 16, 1811
Nails, cylindrical cutting.....	Jacob Perkins.....	Newburyport, Mass.....	Jan. 16, 1815
Nails, cylindrical vibrating machine	Ebenezer A. Lester.....	Baltimore, Md.....	Dec. 27, 1815
Nails, eccentric roller machine...	John Fairbanks.....	Boston, Mass.....	Aug. 14, 1810
Nails, heading.....	Jared Byington.....	Connecticut.....	Dec. 23, 1796
Nails, heading.....	Jason Frost.....	Connecticut.....	Dec. 23, 1796
Nails, heading.....	Matthew C. Groves.....	Massachusetts.....	Sept. 3, 1802
Nails, heading.....	Samuel Rogers.....	Plymouth, Mass.....	Dec. 15, 1807
Nails, heading.....	Asa Chandler and Silas Shepherd.....	Taunton, Mass.....	Sept. 16, 1806
Nails, heading.....	Samuel Rogers.....	Bridgewater, Mass.....	Jan. 26, 1814
Nails, heading.....	Henry Sedam.....	Troy, N. Y.....	Sept. 6, 1815
Nails, heading.....	Elisha Bigelow.....	Massachusetts.....	Jan. 29, 1817
Nails, heading, cut.....	James Davey.....	Fairhaven, Conn.....	April 7, 1814
Nails, from heated rods.....	Jesse Reed.....	Massachusetts.....	June 9, 1801
Nails, from heated rods.....	William Leslie.....	New Hampshire.....	Nov. 5, 1801
Nails, from scoops.....	Nathan Kent.....	New York.....	May 1, 1801
Nails, horse-shoe, and others, cutting from bars of iron.....	Edward Rolph.....	N. Providence, R. I.....	Sept. 16, 1833
Nails, horse, head, machine.....	J. Bratt and E. Gilmore.....	Roxbury, Mass.....	June 1, 1830
Nails, hot, heading.....	Mark and Rich. Reeve.....	Philadelphia, Pa.....	Nov. 14, 1811
Nails, iron, brass, and composition casting.....	Joseph Walworth.....	New York.....	Nov. 22, 1809
Nails, at one operation.....	Melville Otis.....	E. Bridgewater, Mass.....	Mar. 20, 1834
Nail machine, wrought iron.....	Albert W. Gray.....	Middletown, Vt.....	May 16, 1846
Nails, making.....	Walter Hunt.....	New York.....	Nov. 12, 1839
Nails, manufacturing.....	S. Briggs, sen., and S. Briggs, jr.....	Philadelphia, Pa.....	Aug. 2, 1791
Nails, manufacturing.....	Thomas Perkins.....	Pennsylvania.....	Feb. 7, 1794
Nails, manufacturing.....	Jared Byington.....	Connecticut.....	Jan. 15, 1796
Nails, manufacturing.....	John Bigelow.....	Connecticut.....	Nov. 19, 1796
Nails, manufacturing.....	Lester Fling.....	Vermont.....	Dec. 19, 1797

* Additional improvement, November 1, 1815.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Nails, manufacturing.....	Seth Hart.....	Connecticut.....	Jan. 4, 1799
Nails, manufacturing.....	Jacob Perkins.....	.....	Feb. 14, 1799
Nails, manufacturing.....	Michael Garber.....	Virginia.....	Feb. 20, 1801
Nails, manufacturing.....	Nathan Fobes.....	Massachusetts.....	Aug. 2, 1809
Nails, manufacturing.....	William Caruthers.....	Virginia.....	Dec. 13, 1802
Nails, manufacturing.....	Oliver Bartlett, O. Bartlett, and G. Bartlett.....	.....	Feb. 17, 1803
Nails, manufacturing.....	Lazarus Ruggles.....	.....	Oct. 18, 1803
Nails, manufacturing.....	Michael Garber.....	Staunton, Va.....	April 17, 1804
Nails, manufacturing.....	Joseph J. Meff.....	Butternuts, N. Y.....	June 4, 1808
Nails, manufacturing.....	Samuel Wilmot, jr.....	New Haven, Conn.....	April 21, 1809
Nails, manufacturing.....	Jos. and John Elgar.....	Yorktown, Pa.....	Sept. 1, 1809
Nails, manufacturing.....	Mark and Rich. Reeve.....	Burlington, N. J.....	Feb. 3, 1812
Nails, manufacturing.....	Nath'l Chichering and Daniel Chickering.....	Dover, Mass.....	March 9, 1812
Nails, manufacturing.....	Mark and Rich. Reeve.....	Burlington, N. J.....	Mar. 16, 1812
Nails, manufacturing.....	Mark and Rich. Reeve.....	Burlington, N. J.....	Oct. 31, 1812
Nails, manufacturing.....	Jease Reed.....	Hanover, Mass.....	Dec. 16, 1814
Nails, manufacturing.....	Nathan Elgar.....	York, Pa.....	June 19, 1815
Nails, manufacturing.....	John Elgar.....	York, Pa.....	June 21, 1815
Nails, manufacturing.....	Erastus Bartholomew and William Church.....	Boston, Mass.....	Aug. 18, 1815
Nails, manufacturing.....	Charles Philips, jr.....	Sackett's H'bor, N.Y.....	Oct. 21, 1815
Nails, manufacturing.....	William Waring and Charles Philips.....	Jefferson, N. Y.....	Oct. 21, 1815
Nails, manufacturing.....	Henry Hays.....	Philadelphia, Pa.....	Feb. 24, 1816
Nails, manufacturing.....	Frederick A. Russell.....	Georgetown, D. C.....	Mar. 14, 1816
Nails, manufacturing.....	Mark Reeve.....	Philadelphia, Pa.....	June 26, 1816
Nails, manufacturing.....	Mark Reeve.....	Philadelphia, Pa.....	June 27, 1816
Nails, manufacturing.....	Timothy Newhall, jr.....	Essex county, Mass.....	Sept. 7, 1816
Nails, manufacturing.....	Heman McCluer.....	Homer, N. Y.....	April 18, 1817
Nails, manufacturing.....	J. Kells and J. Carter.....	Philadelphia, Pa.....	June 10, 1817
Nails, manufacturing.....	Melville Otis.....	Boston, Mass.....	Dec. 31, 1817
Nails, manufacturing.....	Daniel Pool.....	Zanesville, Ohio.....	Mar. 22, 1820
Nails, manufacturing.....	Abel Smith.....	Zanesville, Ohio.....	Mar. 22, 1820
Nails, manufacturing.....	Thomas Morgan.....	Hempstead, N. Y.....	Sept. 5, 1821
Nails, manufacturing.....	George Thompson.....	Philadelphia, Pa.....	Sept. 15, 1821
Nails, manufacturing.....	Lemuel Bolles.....	New York.....	Sept. 19, 1822
Nails, manufacturing.....	Jos. Kranser.....	Philadelphia, Pa.....	Sept. 23, 1826
Nails, manufacturing.....	Thomas Odiorne.....	Morgan, Mass.....	April 3, 1829
Nails, manufacturing.....	Joseph Hearsey.....	Wareham, Mass.....	May 13, 1830
Nails, manufacturing.....	Jonathan Brett and Eliza Gilmore.....	Roxbury, Mass.....	June 1, 1830
Nails, manufacturing.....	Freeman Palmer.....	Buffalo, N. Y.....	Oct. 25, 1832
Nails, manufacturing, compound lever and parallel shaft for.....	Robert Turner.....	Boston, Mass.....	Nov. 25, 1811
Nails, machine, nippers for Reed's	Stephen Chubbuck.....	Wareham, Mass.....	Jan. 13, 1835
Nail plates, apparatus for feeding	Amos L. Reed.....	Pittsburg, Pa.....	July 24, 1846
Nails for shoeing horses and oxen	J. Holcomb.....	Brandon, Vt.....	July 14, 1846
Nails, and rivets.....	Samuel G. Reynolds.....	Bristol, R. I.....	April 13, 1829
Nails, and screws.....	Stephen J. Gould.....	Litchfield, Conn.....	July 25, 1829
Nails, self-feeding, wrought.....	Thomas Morgan.....	Patterson, N. J.....	June 17, 1844
Nails, sheathing, cast'g into moulds	Thomas McIlwhan.....	Princeton, N. J.....	Oct. 6, 1807
Nails and brads.....	Jordan Dodge.....	Rutland, Vt.....	July 8, 1807
Nails and brads, cutting.....	Peter Zacharie.....	Maryland.....	May 4, 1796
Nails and brads, cutting.....	Jacob Perkins.....	Boston, Mass.....	July 17, 1810
Nails and brads, cutting.....	John P. Swain and J. Skinner.....	Roxbury, Mass.....	Feb. 8, 1811
Nails and brads, cutting.....	Joseph Berry and Oliver P. Rand.....	New Market, N. H.....	Mar. 20, 1837
Nails and brads, brass, copper, and composition.....	George W. Robinson.....	Auleborough, Mass.....	Mar. 17, 1813
Nails and brads, covering the heads of.....	William Mellus.....	Dorchester, Mass.....	Aug. 3, 1822

* Renewed September 28, 1823.

† Renewed August 7, 1834.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WEEK DATED.
Nails and brads, from rolled iron.	Joseph Elgar.....	Brookville, Md.....	Dec. 16, 1888
Nails and brads, and sprigs.....	Increase Kimball.....	New Hampshire.....	May 1, 1888
Nails and brads, and sprigs.....	Roswell Noble.....	Baltimore, Md.....	May 17, 1889
Nails and brads, and sprigs, cylindrical.....	Robert Turner.....	Boston, Mass.....	Feb. 21, 1814
Nails and brads, and spikes, cutting.....	Stephen Belknap.....	Washington, D. C.....	April 8, 1814
Nails and brads, wrought.....	William Slater.....	Clarksville, Ohio.....	Mar. 5, 1834
Nails and spikes.....	Burgess Allison and Richard French.....	New Jersey.....	June 8, 1804
Nails and spikes.....	Abiather Eastman.....	Norway, Mass.....	April 8, 1811
Nails and spikes, grooved and flanged.....	Thomas W. Harvey.	Jamestown, N. Y.....	Sept. 13, 1833
Nails and spikes.....	William Schnebly and Thomas Schnebly..	Hagerstown, Md.....	March 3, 1834
Nails and spikes*.....	Corning & Horner, assignees of Osgood & Hunt.....	Albany, N. Y.....	Mar. 14, 1834
Nails and spikes, heading.....	Rencore Dare.....	Ridgton, N. J.....	Jan. 27, 1838
Nails and spikes, machine.....	Henry Burden.....	Troy, N. Y.....	Dec. 2, 1834
Nails and spikes, wrought.....	William C. Grimes...	York, Pa.....	Dec. 17, 1834
Nails and spikes, wrought, from prepared materials.....	William C. Grimes...	York, Pa.....	Dec. 17, 1834
Nails and spikes, forming.....	William Ballard.....	New York.....	July 17, 1841
Nails and spike, wrought.....	John McCrone.....	Ellicott's Mills, Md.	Feb. 21, 1840
Nails, tacks, &c., cutting.....	James Thompson and H. Rogers, assignees of Walter Hunt...	New York, N. Y.....	Oct. 12, 1843
Nails and spikes, wrought.....	Richard Savary.....	Pittsburg, Pa.....	April 2, 1838
Nails and tacks, feeding apparatus	Jesse Reed.....	Marshfield, Mass.....	April 21, 1885
Nails, vertical balance wheel for cutting.....	Ebenezer A. Lester..	Herkimer, N. Y.....	May 8, 1811
Nails, wrought.....	Daniel French.....	Connecticut.....	Dec. 23, 1796
Nails, wrought.....	Jonah Nicholls.....	Rhode Island.....	July 11, 1807
Nails, wrought.....	Leonard Nercross...	Livermore, Maine...	May 18, 1824
Nails, wrought.....	Henry Burden.....	Troy, N. Y.....	May 26, 1835
Nails, wrought.....	Shadrack Davis, jr..	Dartmouth, Mass.....	Dec. 8, 1829
Nails, wrought.....	Gervase B. Manley..	Canton, Mass.....	Dec. 14, 1830
Nails, wrought.....	Thomas W. Harvey.	Jamestown, N. Y.....	Jan. 24, 1832
Nails, wrought.....	John V. Green.....	New York.....	Dec. 28, 1832
Nails, wrought.....	Reuben Daniels.....	Woodstock, Vt.....	May 13, 1834
Nails, wrought.....	Samuel G. Reynolds..	Providence, R. I.....	Mar. 18, 1835
Nails, wrought.....	N. W. Bishop and Simeon Brooks.....	Saybrook, } Conn. Chester }	Sept. 21, 1837
Nails, wrought.....	Theophilus Somerby.	Wells, Maine.....	Jan. 22, 1840
Needles, manufacture of.....	Abel Morrall.....	Studley, Great Britain	Dec. 21, 1839
Needle and pin machine.....	William F. Hull.....	New York.....	Oct. 15, 1844
Ores, improvement in working...	V. King and J. King.	Bel Air, Md.....	May 30, 1811
Ores, sweeping and washing....	William Davis.....	New York.....	April 28, 1836
Ores, iron, method of reducing...	William Neal Clay, assigned to William Green, jr.	England.....	Mar. 31, 1841, England; July 5, '45, U.S.A.
Ores, washing, apparatus for, separating or dressing.	Nicholas Troughton..	Woodbridge, N.J. } Swansea, England.. }	July 23, 1842, England; July 22, 1844, U.S.A.
Padlocks and other locks.....	Joseph Nock.....	Philadelphia, Pa.....	July 16, 1839
Padlocks for mail bags.....	Solomon Andrews...	Perth Amboy, N. J.....	Dec. 5, 1840
Padlocks.....	William Ball.....	Washington, D. C.....	April 16, 1842
Padlocks.....	E. H. Roper and Wm. Ball.....	Philadelphia, Pa.....	Nov. 9, 1842
Padlocks for mail bags.....	H. C. Jones.....	Newark, N. J.....	April 1, 1842
Patterns, for casting.....	L. H. Mans.....	Danville, Pa.....	Feb. 5, 1836
Patterns, for moulding spikes, bolts	J. and C. Sewall.....	Bath, Me.....	Mar. 25, 1829

* Reissued January 14, 1895.

INVENTORS OR DISCOVERERS.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Pins, arranging, and sticking into paper.....	De Grasse Fowler....	North Bradford, Ct.	Sept. 20, 1844
Pins, making, of wire, at one operation.....	Moses L. Morse.....	Boston, Mass.	Aug. 22, 1814
Pins, making.....	Henry Weston.....	Philadelphia, Pa....	July 23, 1823
Pins, making.....	Lemuel W. Wright..	Manchester, Eng....	Mar. 12, 1825
Pins, manufacturing.....	John J. Howe.....	North Salem, N. Y.	June 22, 1833
Pins.—See <i>Needles</i> .			
Pins, machine for heading and pointing.....	Sam'l G. Reynolds...	Bristol, R. I.	Dec. 31, 1845
Pins making machine.....	John J. Howe.....	Derby, N. Hav. co., Ct.	Mar. 24, 1841
Pins, sticking into paper, machine for.....	Samuel Slocum.....	Poughkeepsie, N. Y.	Sept. 30, 1841
Pins, sticking into paper.—See <i>Class 22</i> .			
Pipes.—See <i>Class 9</i> .			
Pipes, boring and tapping.—See <i>Boring, Class 11</i> .			
Pipes, casting and drawing lead..	Joseph C. Vaughn & Frederick Leach....	Tioga, N. Y.	Dec. 31, 1839
Pipes, coating with tin.....	Thomas Ewbank.....	New York.....	May 16, 1832
Pipes, leaden.....	Richard Wall.....	Waterbury, Ct.....	July 5, 1832
Pipes, leaden.....	George W. Potter....	Oneago, N. Y.	Mar. 23, 1833
Pipes, leaden.....	Alpheus Todd.....	Oxford, N. H.	April 18, 1814
Pipes, leaden.....	R. M. Seydle & Louis Ward.....	Milton, Pa.	Aug. 1, 1838
Pipes, for stills of tin plates, lead.	Thomas Ewbank.....	New York.....	May 9, 1833
Pipes and tubes, casting.....	Willard Badger.....	Boston, Mass.	Dec. 26, 1808
Pipes or tubes, composition of metals.....	Borroughs Titus....	Ulysses, N. Y.	April 19, 1831
Pipes.—See <i>Classes 11 and 15</i> .			
Pipes, machine for making continuously from lead.....	George Escol Sellers..	Upper Darby, Pa...	Dec. 17, 1840
Pipes, machine for riveting.....	Jonathan Ball.....	New York.....	Dec. 20, 1845
Pipes, metal, determining their thickness.....	Horatio Allen.....	New York.....	June 29, 1843
Pipes, metal, machinery and process of manufacturing.....	James E. Serrell.....	New York, N. Y. ...	Jan. 20, 1843
Pipe, lead, machine for making..	Nathan Buttrick, jr..	Chelmsford, Mass..	Nov. 8, 1845
Pipes, lead, machinery for manufacture of.	Chs. Sellers and Geo. E. Sellers.....	Cincinnati, Ohio....	Mar. 9, 1844
Pipes, lead, &c., machine for mak'g.	John Laing.....	Bordentown, N. J..	Mar. 30, 1843
Pipes or tubes of lead, &c.....	B. jr., & H. B. Tatham, ass'ees of Jno. & C. Hanson, of England.	Philadelphia, Pa....	Mar. 29, 1841
Pipes or tubes of lead, tin, &c., machinery for making.	Geo. N. Tatham and Benj. Tatham, jr....	Philadelphia, Pa....	Oct. 11, 1841
Plane irons.....	Peregrine Williamson.	Baltimore, Md.....	Sept. 9, 1835
Plane irons.....	Charles E. West.....	Colehester, Ct.....	Jan. 10, 1837
Plane irons, scythes, &c.....	Daniel Pettibone....	Philadelphia, Pa....	May 6, 1813
Plane irons.....	William Hovey.....	Boston, Mass.....	Mar. 10, 1830
Planes.—See <i>Class 14</i> .			
Plates, horizontal, making holes..	Benjamin King.....	Washington, D. C..	May 29, 1817
Plates and sheets of iron.....	Evan J. Ellicott.....	Baltimore, Md.	May 28, 1818
Plates.—See <i>Class 18</i> .			
Plates, door.....	Edmund J. Sause....	New York, N. Y. ...	Aug. 11, 1843
Plates, door.....	J. H. Grout and Fowler M. Ray.....	New York.....	Mar. 20, 1844
Plates, door and signs, of separate types, &c., method of making..	Edmund Morris.....	Philadelphia, Pa....	April 25, 1844
Pliers, cutting.....	Russel Curtis.....	Springfield, Mass..	Oct. 25, 1832
Polisher, cylindrical.....	Eb. Stowell.....	Middlebury, Vt....	Aug. 20, 1813
Polishing wheel, huff.....	Aaron Broad.....	Litchfield, Ct.....	June 6, 1814
Polishing hard and soft substances.	Benjamin Green.....	Hartford, Vt.....	Mar. 27, 1837
Polishing iron and brass wire for weaver's reeds.....	Arnold Wilkinson....	Providence, R. I. ...	Aug. 31, 1836

*Antedated August 24, 1837; renewed March 14, 1842.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN MADE.
Puddle balls, pressing out instead of hammering.....	William Jones.....	Haverstraw, N. Y..	April 18, 1834
Puddle balls, &c., rolling in the manufacture of iron.....	Henry Burden.....	Troy, N. Y.....	Dec. 10, 1840
Punch, revolving spring.....	Solyman Merrick.....	Springfield, Mass.....	Mar. 17, 1838
Punches, for copper.....	William Ballard.....	Boston, Mass.....	Dec. 6, 1827
Punches, making holes.....	John Sarchet.....	Philadelphia, Pa.....	April 2, 1823
Punches, power press.....	George Darracot.....	Boston, Mass.....	July 21, 1829
Punches, for types.....	Francis Bailey.....	Philadelphia, Pa.....	Jan. 29, 1791
Punching copper or brass.....	John Shugert.....	Pittsburg, Pa.....	July 20, 1831
Punching iron, steel, &c.....	James Bennett.....	Brutus, N. Y.....	July 25, 1833
Punching iron or steel.....	Jedediah Richards.....	Elbridge, N. Y.....	Sept. 26, 1831
Punching metals.....	Levi C. Bunnel.....	Otsego, N. Y.....	Oct. 10, 1834
Punching and shearing iron.....	Lemuel T. Pope.....	Boston, Mass.....	Mar. 17, 1838
Punching metal.....	Samuel H. Brown.....	Wheeling, Va.....	Aug. 14, 1839
Punching sheet iron for stove pipes	Samuel Davis.....	Mifflin, Pa.....	Feb. 21, 1840
Punching machine for the manufacture of covered buttons.....	Alonzo C. Arnold.....	Norwalk, Ct.....	April 23, 1842
Rack, wrench.....	S. Merrick, ass'ee of Jabez C. Terry.....	Springfield, Mass.....	Feb. 20, 1843
Razor, grinding.....	Christian Velténair.....	Virginia.....	Aug. 10, 1804
Razor, manufacturing.....	John Brown.....	Providence, R. I.....	June 28, 1824
Rifles, sharpening edge tools.—See Class 4.			
Rivets and bolt cutter, by lever purchase.....	Holly Seely.....	Unadilla, N. Y.....	May 12, 1825
Rivets, for coopers.....	George W. Sowle.....	New Bedford, Mass.....	May 11, 1832
Rivets, for coopers' use*.....	Timothy Allen.....	Eel Run, Mass.....	Feb. 8, 1833
Rivets, machine for making.....	Horatio G. Reed.....	Scituate, Mass.....	Mar. 12, 1845
Rivets, making.....	Isaiah Jennings.....	New York.....	April 25, 1806
Rivets, making.....	Levi Severance.....	Pittsburg, Pa.....	July 11, 1837
Rivets, making.....	Francis A. Cannon.....	Boston, Mass.....	Sept. 25, 1839
Rivets, making.....	Oliver Edes & Andrew Holmes.....	Braintree, Mass.....	April 24, 1840
Rivets, making.....	Alph. Fobes and Fitch W. Taylor, ass'ees of Charles Lyon and Alpheus Fobes.....	New York.....	Sept. 2, 1840
Riveting metallic plates for boilers	Robert Smith.....	Great Britain.....	Sept. 3, 1839
Rivets and nails, for trunks.....	Luther Houghton.....	Philadelphia, Pa.....	April 15, 1843
Rivet for pickers.....	B. A. Holbrook.....	Providence, R. I.....	May 9, 1846
Rivets and screws, heading.....	Thomas W. Harvey.....	Jamestown, N. Y.....	June 29, 1833
Rollers, for rolling iron, casting.....	Cyrus Alger.....	Boston, Mass.....	Mar. 30, 1811
Rollers, impressed, making knives and forks.....	John Owings.....	Baltimore, Md.....	June 25, 1814
Rollers, cast iron, laminating and flattening metals.....	James Wood.....	Philadelphia, Pa.....	July 20, 1831
Rolling bar iron edgeways.....	George Ellicott.....	Baltimore, Md.....	Sept. 20, 1816
Rolling iron.....	Henry Abbet.....	Pennsylvania.....	May 4, 1802
Rolling iron.....	Abraham S. Valentine.....	Bellefonte, Pa.....	Jan. 3, 1827
Rolling iron, and moulding.....	Josiah White.....	Philadelphia, Pa.....	Mar. 14, 1810
Rolling iron for nails.....	Jesse Reed.....	Massachusetts.....	July 15, 1802
Rolling iron for ships' bolts.....	Clement Rentgen.....	West Chester, Pa.....	June 27, 1810
Rolling metallic tubes.....	Cyrus Eastman.....	Hillsborough, N. H.....	April 16, 1818
Rolling metallic plates, with projections thereon.....	Robert Rittenhouse.....	Amwell town'sp, Pa.....	Mar. 19, 1833
Rolling metals.....	Isaac Hinman.....	New Haven, Ct.....	April 22, 1835
Rolling metals to bar or rods.....	Josiah White.....	Philadelphia, Pa.....	May 15, 1812
Rolling mill.....	William V. Many.....	Albany, N. Y.....	Jan. 30, 1834
Rolling mill, for carriage springs.....	George Stodinger.....	Newark, N. J.....	July 17, 1830
Rolling mill, for circular saws.....	Eleazer Carver.....	Bridgewater, Mass.....	Sept. 27, 1836
Rolling mill, machinery.....	Benjamin Seymour.....	Massachusetts.....	June 26, 1797
Rolling mill, for sheet iron.....	Samuel Rogers.....	Bridgewater, Mass.....	June 24, 1818
Rolling mill, and slitting.....	Isaac Pierson.....	New York.....	Dec. 24, 1807
Rolling press, for edge tools.....	Elisha Gordon.....	Philadelphia, Pa.....	June 26, 1812

* Released July 8, 1849.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Ropes, wire, method of, and machinery for, manufacture.....	John A. Roebling.....	Saxtonburg, Pa.....	July 16, 1842
Sand cores for castings.....	H. Kellogg, ass'tee of J. Kellogg.....	New Hartford, Ct.....	April 25, 1846
Sash fastener.....	James Jones.....	Rochester, N. Y.....	Sept. 3, 1846
Saws, apparatus for filing.....	Nilson J. Wemmer.....	Philadelphia, Pa.....	Mar. 18, 1841
Saw, circular.—See Class 14.			
Saw, circular, cutting teeth in.....	Thaddeus Sellick.....	Philadelphia, Pa.....	Sept. 19, 1838
Saws, circular, cutting the teeth of	Eleazer Carver.....	Bridgewater, Mass.....	Aug. 12, 1840
Saws, circular, stiffening.....	Elijah Pratt.....	Washington co., N. Y.....	Sept. 14, 1843
Saw dresser.....	A. B. Spencer.....	Newton, Ohio.....	June 6, 1846
Saws, filing and smoothing the teeth of.....	Eleazer Carver.....	Bridgewater, Mass.....	Aug. 12, 1840
Saw filing.....	Jacob Arndt.....	Wheeling, Va.....	Feb. 24, 1845
Saw, filing teeth of.....	Elijah Stoker.....	Sent to Georgetown.....	Nov. 8, 1836
Saw, gumming the teeth of.....	Phineas Newton.....	Sidney, N. Y.....	June 19, 1830
Saw, gumming the teeth of.....	Phineas Newton.....	Sidney Plains, N. Y.....	Dec. 23, 1830
Saw, gumming the teeth of saw-mill and crosscut.....	Phineas Newton.....	Sidney Plains, N. Y.....	April 29, 1831
Saw, gumming.....	Jeremiah Case.....	Sodus, N. Y.....	Oct. 25, 1839
Saw, gumming and trimming.....	Jos. Spencer.....	Canajoharie, N. Y.....	Aug. 15, 1831
Saw, gumming.....	Joshua Draper.....	Harrisburg, Ia.....	May 31, 1834
Saw, gumming.....	Henry Johnson.....	Sidney Plains, N. Y.....	Dec. 23, 1830
Saw, manufacturing.....	Stephen Ustick.....	Washington, D. C.....	Aug. 11, 1832
Saw plates.....	James Cloud.....	Chester, Pa.....	Sept. 8, 1834
Saw sharpener.....	Solomon Morse.....	Sempronius, N. Y.....	April 26, 1824
Saw teeth, cutting.....	Andrew T. Mervin.....	Boro. of Muncy, Pa.....	Oct. 28, 1835
Saw teeth, cutting.....	Samuel G. Merriman.....	Southington, Ct.....	April 11, 1836
Saw, for sawing ice.....	John Barker.....	Cambridge, Mass.....	Feb. 3, 1838
Saw trimmer.—See Class 14.			
Saw set.....	Herrick Aiken.....	Dracut, Mass.....	May 24, 1830
Saw set.....	William Hinds.....	Otsego, N. Y.....	Aug. 12, 1833
Saw set.....	Herrick Aiken.....	Middlesex, Mass.....	June 12, 1835
Saw set.....	Theodore Taylor.....	Port Deposit, Md.....	Aug. 15, 1835
Saw set.....	Joseph Beach & David Culver.....	Hartford, Ct.....	Sept. 20, 1839
Saw set.....	E. Waste, N. Wellington, & D. Hutchins.	Bennington & Shaftsbury, Vt.....	Mar. 28, 1836
Saw set, applicable to saws of all descriptions.....	Ebenezer Whiting.....	Berkshire, N. Y.....	Oct. 15, 1830
Saw set, for mills.....	Norman Urquhart.....	Madison co., Ala.....	Feb. 7, 1832
Saw set, gauge.....	Ira Hatch.....	Westford, Vt.....	Oct. 12, 1829
Saw set, spring.....	John Boggs.....	Philadelphia, Pa.....	Oct. 4, 1827
Saw set.....	John Somner.....	Franklin, Pa.....	Nov. 16, 1812
Saw setting, and using saw teeth.	John Russell.....	Brooke, Va.....	Oct. 14, 1815
Saw setting.....	Webb Hart.....	Camden, S. C.....	Dec. 7, 1821
Saw setting.....	Joseph Beach.....	Middletown, Ct.....	Oct. 29, 1822
Saw setting.....	David C. Jordon.....	New York.....	Dec. 2, 1822
Saw setting.....	Rufus Grundy.....	New York.....	Dec. 21, 1822
Saw setting.....	Joseph H. Shreiner.....	Philadelphia, Pa.....	Aug. 19, 1826
Screws, bolts, and nuts, cutting.	Smith Groom.....	Troy, N. Y.....	July 29, 1846
Screws, bolts, pins, and rivets, making.	Lorenzo D. Walter & Jacob Walter.....	Fort Plain, Springfield, N. Y.....	Feb. 7, 1842
Screws, casting metal.....	John Nicholson.....	Herkimer, N. Y.....	April 28, 1810
Screws, cutting.....	David Wilkinson.....	Rhode Island.....	Dec. 14, 1798
Screws, cutting.....	E. Hassard & J. White	Philadelphia, Pa.....	May 15, 1812
Screws, cutting.....	Jacob Sloat.....	Ramapo Cove, N. Y.....	May 4, 1813
Screws, cutting.....	John Hames.....	Richmond, Va.....	Dec. 30, 1813
Screws, cutting.....	Joseph Blackall.....	Albany, N. Y.....	July 29, 1837
Screws, cutting, by circular cutter	Joshua Witherle.....	Boston, Mass.....	Feb. 9, 1815
Screws, cutting, endless.....	John H. Schrader.....	Philadelphia, Pa.....	Oct. 25, 1832
Screws, cutting, for gimblets.....	Chas. Daniels, ass'tee of W. W. Southworth.	Saybrook, Ct.....	Mar. 30, 1830

* Antedated March 12, 1836.

INVENTIONS OR DISCOVERIES.	PATENTERS.	PLACES.	DATES ISSUED.
Screws, cutting and heading.....	John Mason.....	Boston, Mass.....	Mar. 30, 1845
Screws, cutting and heading, wire.	J. H. Pierson.....	Ramapo, N. Y.....	Nov. 26, 1836
Screws, cutting notches in heads..	J. H. Pierson.....	Ramapo, N. Y.....	Nov. 28, 1836
Screws, cutting, of screw bedsteads	Palmer Williams.....	Towanda, Pa.....	Feb. 16, 1837
Screws, cutting and turning iron and steel.	Joel Eastman and Chs. Abbott.....	Bath, N. H.....	Dec. 23, 1830
Screws and nuts, cutting the flutes and threads of.....	Alexander Patton....	Columbus, Ohio....	Mar. 21, 1833
Screws, cutting, wood.....	Abel Stowell.....	Worcester, Mass....	July 19, 1809
Screws, cutting, wood and metal.	John Andrews.....	Dinwiddie co., Va..	Aug. 11, 1817
Screws, cutting, wood, &c., threads of.....	H. Crum.....	Clarkstown, N. Y..	Nov. 14, 1836
Screws, cutting, wood.....	Jacob Sloat and..... Thos. Springsteen....	Ramapo and Pough- keepsie.....	Mar. 30, 1837
Screws, cutting, wood.....	Jas. Keene and Thos. Keene.....	Haverstraw, N. Y..	July 9, 1838
Screw, heads and rivets, cutting and punching metals.....	Enoch Scott.....	Monroe co., N. Y..	Dec. 26, 1833
Screw, heading, wood.....	Abel Stowell.....	Worcester, Mass....	Feb. 4, 1813
Screws, heading blanks.....	Thomas W. Harvey..	New York, N. Y....	Sept. 3, 1846
Screws, improvement in machine for cutting.....	Peter H. Watson....	Rockford, Ill.....	Dec. 3, 1846
Screw, iron, casting in moulds..	E. Lester.....	Herkimer, N. Y....	May 10, 1805
Screws, machine for cutting points on.....	Solyman Merrick....	Springfield, Mass..	Mar. 7, 1846
Screws, manufacture of wood....	Simeon Brooks & W. N. Clark.....	Chester, Ct.....	Jan. 23, 1845
Screws, machine for cutting.....	Cullen Whipple.....	Providence, R. I....	July 10, 1846
Screw, manufacturing the shanks of.....	Jacob Perkins.....	Newburyport, Mass.	Mar. 23, 1813
Screw, manufacturing.....	A. Burnham & Thos. S. Barnum.....	Sharon, Ct.....	Dec. 31, 1813
Screw, manufacturing†.....	William Keane.....	Monroe, N. Y.....	Feb. 13, 1836
Screw, manufacturing.....	James Gleason.....	Philadelphia, Pa....	Mar. 7, 1814
Screw, manufacturing.....	Phineas Dow & Dan'l Treadwell.....	Boston, Mass.....	Aug. 8, 1817
Screw, manufacturing, right and left, for bedsteads.....	Thomas B. Smith....	Troy, N. Y.....	Oct. 11, 1824
Screw, manufacturing, arranging machinery.....	Lemuel W. Wright..	London, Eng.....	Dec. 6, 1838
Screws, metallic.....	John Luther.....	Warren, R. I.....	June 26, 1841
Screw, punch, and rivet cutter...	Levi C. Judson.....	Waterville, N. Y....	Nov. 18, 1825
Screw, slitting and finishing the heads of.....	Joshua Witherle....	Boston, Mass.....	Mar. 7, 1815
Screw, sledge.....	Richard Whitney....	Baltimore, Md.....	April 10, 1830
Screw, wood†.....	Hazard Knowles....	Colchester, Conn....	April 1, 1831
Screw, wood.....	R. C. Read & C. O. Read	Worcester, Mass....	June 27, 1834
Screw, wood or iron, finishing the heads.....	Abel Stowell.....	Worcester, Mass....	July 15, 1813
Screw, wood, turning heads.....	Thomas W. Harvey..	Poughkeepsie, N. Y.	Mar. 25, 1837
Screw, wood§.....	Clement O. Read....	Providence, R. I....	Dec. 15, 1837
Screws, wood, cutting threads of.	Thomas J. Sloan.....	New York, N. Y....	Nov. 24, 1846
Screws, wood.....	Thomas J. Sloan.....	New York, N. Y....	Aug. 20, 1846
Screws, wood, turning heads....	Thomas W. Harvey..	New York, N. Y....	Aug. 18, 1846
Screws, wood, cutting the threads of.....	Alex. Hodges, assignee of Cullen Whipple..	Providence, R. I....	Aug. 18, 1842
Screws, wood, threading.....	Thomas W. Harvey..	New York, N. Y....	May 30, 1846
Screws, wood, nicking heads....	Thomas W. Harvey..	New York, N. Y....	July 2, 1846
Screws, wood, removing burrs from the under sides of the heads of.	Alex. Hodges, assignee of Cullen Whipple..	Providence, R. I....	April 10, 1843
Screws, wood, turning or shaving the heads of blanks for	Alex. Hodges, assignee of Cullen Whipple..	Providence, R. I....	April 6, 1843
Screws, wood cutting.....	Farwell H. Hamilton.	Schenectady, N. Y..	July 8, 1841

* Addit'l imp't Nov. 31, 1839. † Reissued to T. Sellick, adm'r of Wm. Keane, Haverstraw, N. Y., April 16, '38.
‡ Reissued, March 1, 1833. § Reissued October 7, 1846.

INVENTORS OR DISCOVERERS.	PATENTERS.	LOCATIONS.	WHEN MADE.
Screws, wood and rivets, turning the heads of	Henry Crum	Clarkstown, N. Y. . . .	Nov. 16, 1839
Screw-wrench	Henry W. Hewet. . . .	Troy, N. Y.	Aug. 24, 1839
Screw-wrench	Hawley D. Clapp, as g'e of Henry W. Hewet	New York.	June 27, 1840
Screw-wrench	Stephen Kane & Thos. and James Keane. . . .	New York.	Aug. 12, 1840
Screw-wrench	Loring Coes.	Springfield, Mass. . . .	April 16, 1841
Screw-wrench	James Brett.	Newburg, N. Y. . . .	July 10, 1841
Screw-wrench*	Solyman Merrick. . . .	Springfield, Mass. . . .	Aug. 17, 1835
Screw-wrench	John Williams, jr. . . .	Salem, N. Y.	Mar. 4, 1848
Screw, zigzag	Joseph Woodhull. . . .	Rochester, N. Y. . . .	Dec. 31, 1838
Scythes, finishing	Charles McNamara. . . .	Northbridge, Mass. . . .	Jan. 31, 1823
Scythes, manufacturing.	Benj. and John Tyler. . .	Claremont, N. H. . . .	Feb. '1, 1817
Scythes, manufacturing.	Ephraim Kimball, jr. . .	Fitchburg, Mass. . . .	Jan. 17, 1832
Scythes, manufacturing.	Charles McNamara. . . .	Northbridge, Mass. . . .	Jan. 30, 1822
Scythes, manufacturing.	Luther Dudley.	Sutton, Mass.	May 27, 1828
Scythes, manufacturing.	Abel Simonds.	Fitchburg, Mass. . . .	Jan. 23, 1834
Scythes, manufacturing.	Horace Naramore. . . .	Caledonia, N. Y. . . .	Nov. 24, 1834
Scythes, manufacturing.	Augustus W. Searle. . . .	Fitchburg, Mass. . . .	Dec. 17, 1834
Scythes, manufacturing†.	Cyrus Thurston, adm'r of Augustus H. Searle	Fitchburg, Mass. . . .	Dec. 17, 1834
Scythe snaths—See Cutting, Class 1			
Scythes, turning or bending the heel of.	Abel Simonds and Al- bert G. Page.	Fitchburg, Mass. . . .	Dec. 10, 1841
Shears, circular	W. Buckley and Philip Norton.	Berlin, Conn.	Nov. 28, 1846
Shears, rotary	L. & L. J. Lamb. . . .	Berlin, Conn.	Nov. 10, 1846
Shears, cutting brass, copper, &c.	George Christian. . . .	Mentz, N. Y.	Sept. 20, 1834
Shears, cutting pasteboard, sheet iron	Alvah Hardy.	Boston, Mass.	Aug. 12, 1834
Shears, flying, manufacturing. . .	Seth Parsons.	Hoosick Falls, N. Y. . .	June 7, 1836
Shears, tailor's—See Class 21.			
Sheet and boiler iron, &c.	John McNary.	Brooklyn, N. Y. . . .	Dec. 17, 1834
Sheet-iron, machine for bending. .	Henry A. Roe.	Erie, Pa.	Sept. 11, 1845
Shield pins, for securing shawls, &c.	Thomas Woodward. . .	Brooklyn, N. Y. . . .	May 7, 1842
Shoes, horse.	Stephen Decatur and William Tatham. . . .	. . . . .	Oct. 11, 1809
Shoes, horse.	John B. Brown and J. Farmer.	Boston, Mass.	Mar. 11, 1832
Shoes, horse.	Robert E. Horbart. . . .	Pottstown, Pa.	May 24, 1836
Shoes, horse.	Sumner King.	Sullivan, N. Y.	April 1, 1830
Shoes, horse.	David Anthony, jr. . . .	Adams, Mass.	April 8, 1831
Shoes, horse.	John Deitz.	New York.	April 22, 1831
Shoes, horse.	Lewis T. C. Smith. . . .	Scott county, Ky. . . .	Dec. 15, 1831
Shoes, horse.	Ezekial Davis & Sam'l Field.	Oakum, Mass.	Oct. 8, 1834
Shoes, horse.	Charles B. Reed.	W. Bridgewater, Mas	Oct. 20, 1834
Shoes, horse.	Elisha Tolles.	Winchester, Conn. . . .	Oct. 24, 1834
Shoes, horse.	Henry Burden.	Troy, N. Y.	Nov. 23, 1835
Shoes, horse, cast iron, oxen . . .	Stephen W. Whitman. . .	Madison, Ohio.	Nov. 4, 1825
Shoes, horse and oxen.	Peter Sternberg.	Danube, N. Y.	April 10, 1831
Shoes, horse.	Barzillai Young & Sam. Titus.	Brooklyn, Conn. . . .	July 29, 1837
Shoeing, swinging horse frame for	Joseph Kirk.	Weston, Vt.	Nov. 8, 1826
Shovel, making	Oliver Aimes.	Easton, Mass.	Mar. 5, 1837
Shovel, socket and sand.	John Righter.	Downington, Pa. . . .	July 23, 1811
Shovel, scoop.	E. Mudge & R. Tenny. .	Alexandria, N. Y. . . .	April 6, 1831
Shovel, scoop.	Mordecai Bull.	Greenwich, N. Y. . . .	Sept. 28, 1831
Shovel, scoop.	John & Wm. Smith. . .	Williamston, Mass. . . .	Feb. 25, 1835
Shovel, scythes, spades, &c. of cast steel, &c.	Elizabeth H. Bulkley. . .	Colchester, Conn. . . .	Feb. 28, 1828
Shovel, sheet iron.	John Brower.	Berks county, Pa. . . .	Feb. 19, 1819
Shovel, sand spades.	James Wood.	Philadelphia, Pa. . . .	Feb. 10, 1825

* Released May 17, 1840.

† Released October 12, 1842.

INVENTIONS OR DISCOVERIES.	PATENTEE.	REFERENCE.	WHEN MADE.
Shovel, and spades*.....	Ch. Richmond & Sam ^l Caswell, jr.	Taunton, Mass.	April 7, 1831
Shovel, swagging and setting ...	Upton Reid	Joppa & Roads, Md	Aug. 31, 1819
Shutters, apparatus for closing and retaining.....	Jacob Shaw, jr.	Hinkley, Ohio.	July 20, 1846
Shutters, opening and fastening..	Samuel Lichtenthaler.	Litiz, Pa.	July 14, 1846
Shutter and blind fasteners†....	William H. Mackrell.	New York, N. Y.	June 13, 1831
Silver and gold, washing and amalgamation.....	Samuel Asbury.	Coburn's p. o. N. C.	May 2, 1846
Silver ware, manufacture of	Walter W. Hart.	Philadelphia, Pa.	May 9, 1846
Sickles, files, &c., cutting.	Simon Hornback.	Lafayette, Ind.	Feb. 11, 1831
Sink, cast iron.—See Class 17.			
Skates.....	Welcome Whittaker..	Troy, N. Y.	Dec. 30, 1831
Skates.....	Nathaniel C. Sanford.	Meriden, Conn.	Mar. 7, 1834
Slitting mill.....	Tim. Allen.	Plymouth, Mass.	April 5, 1836
Sockets, iron, making.....	Leo. Morse, assignee of Harvey Pettee ...	Foxborough, Mass.	Dec. 28, 1838
Sockets for holding tools.....	Herrick Aiken.....	Franklin, N. H.	Dec. 27, 1839
Spade, pronged.....	William B. Horton...	Middletown, Conn.	June 15, 1839
Spade, socket.....	Ch. Richmond & Sam. Caswell, jr.	Taunton, Mass.	July 13, 1832
Spelter.—See Zinc.			
Spikes, bolts, nails, &c. cut and wrought	W. T. Steiger	Washington, D. C.	Jan. 8, 1843
Spikes, nails, &c., clinching of ..	James Buckelew	Spotswood, N. J.	Sept. 3, 1843
Spikes, nails, &c., clinching of ..	William Emmons....	New York, N. Y.	Sept. 3, 1843
Spikes, heading.....	William Thomas....	Hingham, Mass.	Mar. 14, 1840
Spikes, heading.....	Robert S. Harris....	Wilmington, Del.	Jan. 25, 1841
Spikes, hook or brad-headed†....	Henry Burden.....	Troy, N. Y.	Sept. 2, 1846
Spikes.—See Nails.			
Spikes, improvement in making..	William Hatch.....	Medford, Mass.	July 28, 1846
Spike machine, improvement on Burden's patent.	John F. Winslow and Israel Blanchard....	Troy, N. Y.	May 10, 1845
Spike machines.....	Samuel Reynolds....	Bristol, R. I.	July 26, 1844
Spikes, wrought iron, machine for making	Harry A. Wills.	Keensville, N. Y.	Mar. 21, 1843
Spoons, &c., buff for polishing...	Luther Boardman....	East Haddam, Ct.	Dec. 15, 1843
Spoons, casting, forming moulds for	Luther Board	Chester, Ct.	Oct. 7, 1842
Spoons, casting.....	Thomas Mix.....	Cheshire, Conn.	March 5, 1833
Spoons, casting.....	William Mix.....	Prospect, Conn.	June 28, 1836
Spoons of block-tin, improvement in manufacture of	Joel Hall, 2d	Wallingford, Conn.	April 25, 1846
Spoons, forks, &c., design.....	Michael Gibney.....	New York.....	Dec. 4, 1844
Spoons, manufacturing.....	Thomas Bruff	Maryland.....	Sept. 14, 1801
Spoons, manufacturing.....	Isaiah Bisbee.....	Bath, Mass.	Nov. 20, 1809
Spoons, manufacturing.....	Jacob Perkins.....	Newburyport, Mass.	June 29, 1813
Spoons, manufacturing.....	James Ridgway.....	Groton, Mass.	Sept. 22, 1814
Spoons, manufacturing.....	William Gale.....	New York.....	Dec. 7, 1836
Spoons, manufacturing.....	Archibald Little.....	Bridgton, N. J.	Dec. 14, 1830
Spoons, manufacturing.....	Robert Butcher.....	Philadelphia, Pa.	Dec. 27, 1830
Spoons, manufacturing.....	Charles Goodyear.....	Philadelphia, Pa.	Aug. 11, 1832
Spoons, plating, mill for	Sanford Boon.....	Hamilton, N. Y.	July 19, 1838
Spoons, silver, mill.....	J. Brockway.....	Troy, N. Y.	Sept. 20, 1836
Spring bearer, for window sash..	William McLean....	Allegheny, Pa.	May 2, 1846
Spring bolt for door and other locks	G. W. and Ezra B. Robinson.....	Boston, Mass.	June 10, 1840
Springs for carriages.—See Class 10.			
Springs.—See Sofa, &c., Class 17.			
Springs, door, for closing doors..	Charles Ellis.....	Boston, Mass.	Dec. 15, 1843
Spring, door.....	William W. Smith and Benj. Mulliken, jr.	New York	Nov. 13, 1840
Spring door, for closing doors, gates.....	Gardner Barton, jr.	Shaftsbury, Vt.	July 1, 1840

* Disclaimer Feb'y 24, 1842.

† Renewed Dec. 16, 1839.

‡ Antedated March 2, 1840.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WEEK ISSUED.
Spar bits.— <i>See Augur.</i>			
Spurs, improvement in.....	Charles C. Reinhardt.	Baltimore, Md.....	June 24, 1843
Steel, carbonated, from wrought iron.....	Stephen Pope.....	New York.....	Nov. 20, 1829
Steel, cast, or iron.....	Horatio G. Spafford.	Albany, N. Y.....	Oct. 30, 1822
Steel, cast, or wrought.....	Horatio G. Spafford.	Albany, N. Y.....	Oct. 30, 1822
Steel, cast, scrap or bar iron, converted into.....	Samuel Collins.....	Troy, N. Y.....	April 10, 1823
Steel, cast, welding to iron.....	Daniel Pettibone.....	Boston, Mass.....	Aug. 21, 1819
Steel, converting iron partially into	Ebenezer Jenks.....	Colebrook, Conn.....	Jan. 28, 1818
Steel, converting iron partially into	Eleazor L. Losey.....	New Brunswick, N.J.....	Nov. 20, 1823
Steel, converting iron partially into*	Walter R. Johnson.....	Philadelphia, Pa.....	June 30, 1838
Steel, increasing the strength of...	Walter R. Johnson.....	Philadelphia, Pa.....	July 9, 1838
Steel, from pig iron.....	Enoch Leonard.....	Canton, Mass.....	Jan. 6, 1812
Steel and iron, manufacture of...	Charles Low.....	England.....	May 28, 1846 English pat't dated May 25, 1844.
Steel, cast, manufacture of.....	Josiah M. Heath.....	London, England...	Oct. 24, 1846; English pat't dated February 4, 1845.
Steel, manufacture of.....	Simeon Broadmeadow	New York.....	May 25, 1844
Steel, mode of hardening.....	Perry Davis.....	Fall River, Mass...	Aug. 4, 1841
Steel, revolving.....	Benjamin E. Hoyt...	Ipswich, Mass.....	Aug. 20, 1834
Steel, tempering.....	Collins Manufacturing Company, assignee of Elisha H. Root..	Collinsville, Conn...	Mar. 10, 1843
Steel, tempering.....	David Hartley.....	Westminster, Eng'd	Feb. 24, 1792
Steel, tempering, for cutting glass.	Benjamin Duvall.....	Virginia.....	Feb. 14, 1799
Steel, welding to iron.....	D. Pettibone, Ex. Chapman, and J. Nichols	Albany, N. Y.....	Dec. 22, 1802
Steel, welding to iron.....	Daniel Pettibone.....	Roxbury, Conn.....	Mar. 22, 1806
Steel, &c., welding by pit coal...	Benjamin King.....	Washington, D. C.....	Nov. 15, 1811
Stirrups.....	Daniel Adams.....	Keene, N. J.....	Feb. 3, 1819
Stirrups, iron.....	Daniel Powles.....	Baltimore, Md.....	Jan. 26, 1827
Stirrups for paddle wheels of steam and other boats, machine for bending.....	Alexander B. Latta...	Cincinnati, Ohio...	Mar. 30, 1843
Stirrups for saddles.....	John Carrel.....	Petersburg, Va.....	June 7, 1839
Stirrup, safety-spring.....	A. Pawling.....	Philadelphia, Pa.....	June 16, 1846
Stove pipe, mouldings, &c., making	John Farrar.....	Cuyahoga, Ohio....	Sept. 2, 1840
Stove pipe, manufacturing.....	Richard Wheatley and James Beaumont...	Boston, Mass.....	Nov. 4, 1807
Stove pipe, manufacturing.....	John Colby.....	Salisbury, Mass.....	Feb. 16, 1825
Stove pipe.— <i>See Class 5.</i>	E. Nott.....	Schenectady, N. Y...	June 29, 1833
Striker, for smith's work.....	Lewis Stipe.....	Stokes county, N. C.	Sept. 6, 1833
Striker, blacksmith, assistant...	William B. Dobson...	Surry county, N. C.	April 25, 1834
Striker, for hammering iron...	Joel Woodel.....	Jackson, Tenn.....	Aug. 6, 1834
Striker, blacksmiths, for forging iron.....	Ebenezer Brooks.....	Ridgeville, Va.....	Feb. 16, 1843
Tacks, making.....	Jesse Reed.....	Hanover, Mass.....	Aug. 1, 1816
Tea pots, and other vessels of Britannia ware, manufacture of.— <i>See Class 17.</i>			
Tew iron.....	William Barker.....	Luzerne county, Pa.	Nov. 10, 1818
Tew iron.....	John Shugert.....	Elizabethtown, Pa.	Nov. 31, 1836
Thimbles.....	Asa Spencer.....	New London, Conn.	June 8, 1804
Thimbles, for sailmakers.....	Isaiah Jennings...	New York.....	Nov. 20, 1807
Thimbles, rims, without soldering	Stephen Chandler...	New York.....	Feb. 4, 1811
Thimbles, rims.....	Stephen Chandler...	New York.....	Sept. 20, 1816
Tin, opening sheet.....	Calvin Whiting and Eli Parsons.....	Massachusetts.....	April 14, 1804
Tin plate, coating with lead.....	Jos. M. Truman.....	Philadelphia, Pa.....	Sept. 29, 1831
Tin plate, manufacturing.....	David Noble.....	Philadelphia, Pa.....	May 9, 1814

* Antedated December 30, 1837.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	DATE GRANTED.
Tin plate, manufacturing.....	Aaron Burk.....	New York.....	Feb. 11, 1825
Tin plate ware.....	Edward M. Converse..	Southington, Conn..	July 20, 1825
Tin plate ware, wiring machine..	Edward M. Converse..	Southington, Conn..	Nov. 19, 1825
Tin ware, manufacturing.....	Seth Peck.....	Southington, Conn..	April 23, 1829
Tin ware, manufacturing.....	Oliver Hubbard.....	Claremont, N. H....	Nov. 12, 1829
Tin ware, manufacturing.....	Barnabas Langdon....	St. Albans, N. Y....	May 16, 1830
Tin ware, seaming.....	James Redheffer.....	Bridge-town, N. J....	Mar. 6, 1835
Tin ware, machine for double seam- ing*	Daniel Newton.....	Lewisville, Ky.....	Dec. 20, 1845
Tin, &c., double seaming.....	Hiram Van Pelt and Benj. Armstrong....	Troy, N. Y.....	Sept. 30, 1830
Tin and other metals, cutting....	William Bulkley and Otis M. Inman.....	Berlin, Conn.....	Nov. 3, 1841
Tongs, cast iron.....	Enos H. Buel.....	Marlborough, Conn..	Mar. 6, 1833
Tongs, fire irons.....	Richard Whittingham..	New York.....	June 8, 1821
Tools, edge.....	Horatio G. Spafford..	Troy, N. Y.....	Dec. 19, 1822
Tools, machine for grinding.....	William Hovey.....	Worcester, Mass....	Sept. 23, 1845
Tools, holding and guiding.....	George A. Medeira....	Chambersburg, Pa..	April 19, 1832
Tops, pepper and ink.....	William Markland....	New York.....	Oct. 1, 1830
Trip hammer.....	John F. Gould.....	Mar. 8, 1806	
Trip hammer.....	Joel Fox, jr.....	Middlesex, Mass....	Feb. 25, 1807
Trip hammer.....	John Smith.....	Otsego, N. Y.....	Oct. 14, 1809
Trip hammer.....	Ezra Osborn.....	Berkshire, Mass....	Jan. 8, 1810
Trip hammer.....	Elisha Downer.....	Depuyster, N. Y....	April 11, 1810
Trip hammer.....	Oliver Aimes.....	Plymouth, Mass....	April 25, 1810
Trip hammer.....	Joseph Hines.....	Providence, R. I....	June 16, 1810
Trip hammer.....	Joseph Goulding.....	Leicester, Mass....	March 1, 1811
Trip hammer.....	Josiah Beal.....	Ontario county, N. Y.	Oct. 5, 1811
Trip hammer.....	Stephen Morrill.....	Readfield, Mass....	Sept. 28, 1812
Trip hammer.....	Urban Palmer.....	Spencer, N. Y.....	July 31, 1815
Trip hammer.....	Jac. Eversol.....	Botetout county, Va.	May 3, 1821
Trip hammer.....	William Bowling.....	Harrisonburg, Va....	July 1, 1823
Trip hammer.....	Elisha Crowell.....	Gardiner, Maine....	Aug. 4, 1825
Trip hammer.....	Philip P. Read.....	Mercer, Maine....	Dec. 7, 1826
Trip hammer.....	Levi Rosenkrans.....	Big Flat, N. Y.....	Mar. 17, 1828
Trip hammer, foot.....	E. Pierce and J. Hatha- way.....	Pultney, N. Y.....	Oct. 19, 1827
Trip hammer, portable.....	Samuel Kilburn.....	Sterling, Maine....	Aug. 18, 1829
Trip hammer.....	Heman Redfield.....	Grafton, Mass....	March 6, 1835
Tuyere, and water back.....	Oliver Aimes.....	Plymouth, Mass....	June 24, 1809
Tuyere, and water back.....	Gideon Davis.....	Sandy Spring, Md....	May 26, 1810
Tuyere, and water back.....	Asa Blood.....	Conhocton, N. Y....	Oct. 24, 1826
Tuyere iron, blacksmith's.....	John Shugert.....	Elizabeth, Pa.....	May 9, 1830
Tuyere iron, blacksmith's.....	Elias Kaighn.....	Kaighn's Point, N. J.	April 2, 1841
Tuyere iron, blacksmith's.....	Riverius C. Stiles and Joseph B. Graves....	East Bloomfield, N. Y.	Dec. 14, 1841
Twyers.....	Calvin McKay.....	Lyons, N. Y.....	Nov. 14, 1846
Twyers, blacksmith's.....	Daniel C. McMillen....	Perrin, N. Y.....	Nov. 14, 1846
Twyers, or tew iron.....	Charles W. Grannis....	Collins, N. Y.....	June 16, 1846
Types.—See Class 18.			
Type casting.—See Class 18, Type.			
Tyre, railroad locomotive, mode of manufacturing.....	D. Saunders, J. G. Bissett, and Samuel Saunders.....	Pittsburg, Pa.....	July 28, 1846
Umbrella runner.....	Joseph Barnhurst....	Francisville, Pa....	June 25, 1830
Vault lights, metallic rims for...	Edward Rockwell.....	New York.....	March 8, 1834
Vessels of soft metal, method of making.....	John Rand.....	Citizen United States now in G. Britain..	Aug. 7, 1844
Vice.....	John Wetherell.....	Alleghany, Pa.....	April 22, 1839
Vice.....	John S. Markam, as- signee of E. G. Mat- thews.....	Worcester, Mass....	Aug. 11, 1843
Vice, parallel bench.....	William H. Taylor and A. P. Norton.....	Rochester, N. Y. } Waterville, N. Y. }	May 16, 1845

* Antedated July 7, 1845.

Antedated December 21, 1836.

INVENTIONS OR DISCOVERIES.	PATENTEE.	REFERENCE.	DATE MADE.
Vice, bench.....	Jeremiah Post.....	Waterbury, Conn...	Dec. 20, 1833
Vice, bench, metal.....	James Keane and Thomas Keane.....	Haverstraw, N. Y.	Aug. 20, 1838
Vice, bench, and other.	Linus Dean.....	Utica, N. Y.....	Feb. 16, 1837
Vices, making the jaws of.....	William Sim.....	Schenectady, N. Y.	Oct. 11, 1841
Vice, socket.....	Luther Hermanway.....	Sullivan, N. H.....	Sept. 4, 1835
Vice, stock, and hand.....	Enoch D. McCord.....	Sandy Hill, N. Y....	Oct. 1, 1836
Vice, superior.....	James Lang.....	Harrison county, Pa.	Jan. 10, 1834
Ware.—See Tin.			
Window blind fasteners.....	Mileden M. Isbel....	New Haven, Ct....	June 28, 1835
Window blind fasteners*.....	Sylvanus Fansher....	Southburg, Ct.....	April 10, 1841
Window blinds, fastener.....	James A. Carver.....	Taunton, Mass.....	Feb. 27, 1836
Window blinds, fastener.....	Jonathan Bacon.....	Bedford, Mass.....	April 28, 1836
Window blinds, fastener.....	Elijah Jaquith.....	Brattleborough, Vt.	Dec. 26, 1837
Window blinds, scouring.....	Wm. H. Mackrell.....	Bushwick, N. Y....	June 13, 1831
Window blinds, spring catch.....	William Phelps.....	Salem, Mass.....	July 7, 1836
Window blinds, and door.....	Seril Steere.....	Gloucester, R. I....	Mar. 25, 1835
Window catch, rule joint for.....	Noble Hurdle.....	Georgetown, D. C....	Oct. 1, 1818
Window catch, and door fastening.....	Stephen Heywood.....	Plainfield, Mass....	Oct. 17, 1835
Window catch, and door fastening.....	James R. Post.....	New York.....	July 21, 1831
Window fastening.....	Marcus Merriman, jr.	New Haven, Ct....	June 20, 1836
Window fastening.....	Enoch Robinson and Wm. Hall.....	Boston, Mass.....	Sept. 11, 1841
Window fastening, combined sp'g	Phillippe F. Hazard..	Philadelphia, Pa....	July 11, 1837
Window fastening, self-adjusting spring.....	Holly Seely.....	Unadilla, N. Y.....	July 14, 1828
Window sash, bolt and spring.....	Marcus Merriman, jr.	New Haven, Ct....	April 14, 1835
Window sash, cast iron.....	Isaac McNary.....	Stafford, Ct.....	Feb. 23, 1828
Window sash, cast iron.....	James S. Stoddard.....	Macedon, N. Y.....	Oct. 14, 1835
Window sash, and shutter fasten'g	Benjamin S. Wolcott.	Connecticut.....	Dec. 4, 1802
Window sash, fastening.....	Jacob Osborn.....	Connecticut.....	Nov. 24, 1803
Window sash, fastening.....	Daniel M. Miller.....	Haddam, Ct.....	Mar. 8, 1804
Window sash, springs.....	Samuel J. Kemp.....	Norwalk, Ct.....	July 1, 1803
Window sash, springs.....	James Curtis.....	Massachusetts.....	Dec. 10, 1803
Window sash, springs.....	Joseph Eaton.....	Boston, Mass.....	April 14, 1804
Window sash, springs.....	John Ballthorpe.....	.....	May 22, 1811
Window sash, spring bolt.....	Nathaniel Briggs.....	New York.....	Oct. 13, 1813
Window sash, spring fastener.....	George W. and Ezra B. Robinson.....	Boston, Mass.....	Feb. 7, 1842
Window sash, spring and catch.....	Menson L. Stevens....	Waterbury, Ct.....	Jan. 9, 1835
Window sash, sp'g for upper sash	Henry Hammond.....	Lewisburg, Pa.....	Sept. 8, 1837
Window shutter, fastening.....	James Blanchard.....	New York.....	Jan. 14, 1809
Window, shutter fastening.....	B. West and P. Soper.	Rome, N. Y.....	Jan. 31, 1822
Window, shutter fastening.....	Nathaniel Briggs.....	New York.....	Oct. 21, 1824
Window, shutter fastening.....	Truman Bartholomew	New York.....	Feb. 19, 1828
Window, shutter fastening.....	Neal Hall and Jotham Chase.	Cumberland & York co., Maine.....	Oct. 11, 1836
Window, shutter fastening.....	Truman Bartholomew	New York.....	June 30, 1829
Window, shutter fastening.....	Thomas C. Cary.....	Poughkeepsie, N. Y.	Dec. 30, 1841
Window shutter & blind fast'ners	James P. McKean.....	Washington, D. C....	April 24, 1841
Window spring.....	Isaac Scott.....	New Haven, Ct....	Dec. 26, 1804
Window spring.....	George Cannon.....	Nantucket, Mass....	Dec. 27, 1810
Window spring.....	Gideon Drake.....	Hartford, Ct.....	Oct. 26, 1818
Window spring.....	Hez. Salisbury, jr....	Brattleborough, Vt.	May 24, 1819
Window spring, bolt and key.....	Roger Smith.....	Norwich, Ct.....	Mar. 8, 1810
Window spring, bolt.....	Shadrach Trumbull..	Suffield, Ct.....	April 23, 1816
Window spring, fastener.....	Jonathan Bacon.....	Bedford, Mass.....	June 20, 1838
Wire.—See Metal.			
Wire, cap.....	Melville Kelsey.....	New York.....	Mar. 12, 1836
Wire, cutting.....	Abiel Stevens.....	Andover, Mass.....	Nov. 11, 1828
Wire, cutting and heading.....	Thomas W. Harvey....	Poughkeepsie, N. Y.	Mar. 25, 1837
Wire, drawing.....	William Wadsworth....	Hartford, Ct.....	Oct. 6, 1812
Wire, drawing.....	John T. & T. Walden	New York.....	Oct. 31, 1812
Wire, drawing.....	John J. Staples.....	Flushing, N. Y.....	May 10, 1813

* Associated Dec. 10, 1840.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Wire, drawing, card and other...	Russel Prouty.....	Spencer, Mass.,....	Jan. 19, 1822
Wire, fences and nets.....	Chauncey Hall.....	Meriden, Ct.....	Nov. 27, 1829
Wire gauze, looms for weaving..	Melchoir Bretzger....	Pittsburg, Pa.....	Dec. 5, 1846
Wire, machine for beating and cleaning.....	John J. Howe.....	Derby, Ct.....	Dec. 26, 1845
Wire, rolling.....	James Howell.....	Philadelphia, Pa....	June 11, 1812
Wire ropes, machine for making.	R. S. Newall.....	Gateshead, upon Tyne, England.	Aug. 26, 1846; English patent Mar. 6, 1843.
Wire rope, round flexible.....	Isaac McCord.....	Harrisburg, Pa....	July 6, 1839
Wire, from steel, copper, &c....	Thomas Wallace.....	Haverstraw, N. Y..	Mar. 28, 1834
Wire, weaving.....	T. Kirk and J. Leslie.	York, Pa.....	May 9, 1793
Wire, winding and spinning....	Henry Burke.....	Philadelphia, Pa....	June 18, 1810
Wrench, rack.....	Henry King.....	Springfield, Mass...	Oct. 25, 1832
Wrench, rack.....	Solyman Merrick....	Springfield, Mass...	April 18, 1834
Wrench, rack.....	Alonzo G. Hull.....	Troy, N. Y.....	June 30, 1836
Wrench, screw*.....	Solyman Merrick....	Springfield, Mass...	Aug. 17, 1835
Zinc, or spelter, manufacture....	Samuel Davis.....	New York.....	April 18, 1831
Zinc, or spelter, manufacture....	Samuel Davis.....	New York.....	Aug. 11, 1831

* Reissued May 17, 1842.

CLASS No. III.

MANUFACTURES

OF

**Fibrous and Textile Substances, including machines for
preparing Fibres of Wool, Cotton, Silk, Fur,
Paper, &c.**

LIST OF PATENTS.

CLASS III.—MANUFACTURES of Fibrous and Textile Substances, including Machines for preparing Fibres of Wool, Cotton, Silk, Fur, Paper, &c.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Asclepias syriaca, manufacturing external fibres.....	Margaret Gerrish	Salem, Mass.	Mar. 27, 1834
Bags, for separating elaine and stearine by pressure.....	Martin H. Shepard...	Cincinnati, Ohio....	May 26, 1843
Blankets.....	Elkanah Cobb.....	Georgetown, D. C..	April 29, 1812
Blankets.....	Jac. Getzendenner....	Frederick co., Md..	Sept. 30, 1814
Blankets, and cloth.....	A. Barnes, S. Gray, & Jabez Clark.....	Windham, Ct.	Feb. 3, 1813
Bobbin, cotton spool.....	Nathaniel Rider.....	Milbury, Mass.....	Dec. 31, 1833
Bobbin, and flyer.....	Charles Danforth....	Ramapo, N. Y.....	Sept. 2, 1828
Bobbin, and flyer, Canton woollen	William B. Taber....	Canton, Mass.....	Jan. 30, 1829
Bobbin machine.....	James A. Post.....	Warwick t'ns'p, N.Y.	April 23, 1828
Bobbin tube.....	Job Manchester.....	Warwick, R. I.....	Dec. 13, 1824
Bobbin tube.....	Benj. Hutchinson....	Philadelphia, Pa....	Oct. 18, 1827
Bonnets, &c., machinery for pressing.....	Richard Murdock....	Baltimore, Md.....	Oct. 12, 1842
Bonnet, portable.....	Thomas Hammond....	New York.....	Oct. 30, 1844
Bonnet tips, pressing apparatus for	Thomas Kendall....	New York.....	Sept. 3, 1844
Braid, machinery for pressing braid after it has been trimmed.....	Henry H. Robbins....	Middleboro', Mass..	April 10, 1841
Braid, machinery for trimming straw braid.....	Henry H. Robbins....	Middleboro', Mass..	Feb. 18, 1841
Braiding machine.....	Dudley D. Sacket....	Westfield, Mass....	Jan. 22, 1840
Braiding machine, braiding manilla.....	Daniel, Jesse, & Elisha Fitzgerald.....	New York.....	April 24, 1840
Braiding.....	John Thorp.....	Providence, R. I....	Aug. 10, 1821
Braiding.....	John Thorp.....	Providence, R. I....	July 10, 1826
Braid, Tuscan, &c., weaving.....	Elisha Fitzgerald....	New York.....	Oct. 16, 1844
Brushes for cotton gins.....	Edwin Keith.....	Bridgewater, Mass..	Sept. 19, 1845
Burrs, cleaning from wool, & seed from cotton.....	Theodore Eli.....	New York.....	Sept. 14, 1843
Burrs, &c., picking and separating, also applicable to ginning cotton*	Francis A. Calvert....	Patterson, N. J.....	June 3, 1843
Burring machine.....	Thos. S. Washburn....	Lowell, Mass.....	Oct. 11, 1845
Burring machine.....	Alanson Crane.....	Lowell, Mass.....	Oct. 11, 1845
Calico, &c., printing.....	Godfrey Woone.....	London, Eng.....	April 2, 1838
Calico, &c., printing.....	Bennet Woodcroft....	Hardwick, Eng.....	April 5, 1838
Calico, &c., printing.....	Alden Sibley.....	Pawtucket, Mass....	July 9, 1838
Calico and paper, printing.....	Leonard Beatty.....	Wilkesbarre, Pa....	Dec. 28, 1810
Cans, cotton.....	Horatio Moses.....	Patterson, N. J.....	Mar. 12, 1833
Cans, cotton.....	William A. Crocker....	Taunton, Mass.....	June 3, 1834
Cans, shoe.....	James Dennis.....	Providence, R. I....	Sept. 8, 1834
Cap, substitute for fliers.....	Joseph Ripka.....	Manayunk, Pa.....	July 31, 1833
Cap spinner.....	Jacob Peters.....	Kensington, Pa.....	June 6, 1846
Carding, composition, applied....	Ziba Parkhurst.....	Grafton, Mass.....	Aug. 19, 1826
Carding, cotton.....	Wm. B. Leonard.....	Fishkill, N. Y.....	Sept. 16, 1833
Carding, drawing and roping	William Tiffany and P. Allen.....	Otsego, N. Y.....	July 17, 1815
Carding engine.....	John Boynton.....	South Coventry, Ct.	July 12, 1843
Carding engine, feeding or delivering rollers of.	J. & H. C. Gleason, & N. D. White, ass'ees of H. Barbour.....	Lowell, Mass.....	May 19, 1843

* Reissued Dec. 27, 1843.

† Antedated Jan. 12, 1843.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Carding engine, machinery for making laps for feeding.....	John Mason.....	Great Britain.....	Feb. 10, 1843
Carding engine*.....	Charles Pooley.....	Chorlton upon Medlock, G. B.....	Aug. 22, 1846
Carding, for gleaningsavers.....	James Hugus.....	Greenbush, Pa.....	Sept. 15, 1815
Carding hair of neat cattle.....	Arthur Kimball.....	New York.....	Nov. 4, 1813
Carding hats, fur and wool.....	Arnold Buffum.....	Feb. 21, 1807	
Carding hats, wool.....	Abner Guild.....	Dedham, Mass.....	Mar. 31, 1806
Carding machine.....	Heman Palmerler.....	Shoreham, Vt.....	May 25, 1811
Carding machine.....	John Jessup.....	Orange co., N. Y.....	Feb. 6, 1813
Carding machine.....	Joshua Woodward.....	Portage, Ohio.....	May 2, 1821
Carding machine.....	Nathaniel Rider.....	Sturbridge, Mass.....	Mar. 12, 1825
Carding machine.....	Elijah Thompson.....	Lowell, Mass.....	June 9, 1826
Carding machine.....	James H. Arnold.....	Bellemont, Ohio.....	Sept. 25, 1826
Carding machine.....	John Tillou.....	Newton, Ct.....	Sept. 8, 1827
Carding machine.....	Henry A. Shannon.....	Columbia co., N. Y.....	April 5, 1828
Carding machine.....	D. M. Bacon.....	Huntington, Pa.....	April 10, 1829
Carding machine.....	John Boynton.....	South Coventry, Ct.....	April 11, 1829
Carding machine.....	J. W. Shankland.....	Summerfield, Ohio.....	May 5, 1829
Carding machine.....	Uriel G. Warner.....	Ripley, Ohio.....	Oct. 1, 1830
Carding machine.....	P. L. King and E. B. Bladell.....	Sparta & Lawrenceburg township, Ia.....	Oct. 14, 1830
Carding machine.....	Robert Bartlett.....	Ripley, Ohio.....	Oct. 25, 1832
Carding machine.....	Luther Colburn.....	Fairfield, Vt.....	Nov. 20, 1832
Carding machine, packing sheets of leather on cylinders.....	Joshua Lamb.....	Leicester, Mass.....	Aug. 21, 1819
Carding machine†.....	M. W. Obenchain.....	Springfield, Ohio.....	July 20, 1846
Carding machine.....	Charles Bishop.....	Newtown, Ct.....	Sept. 26, 1846
Carding machine.....	Hugh Whiteman.....	Pittsburg, Pa.....	Feb. 12, 1846
Carding machine, self-stripping card for carding fibrous substances.....	H. Barbour and J. Gleason.....	Lowell, Mass.....	Dec. 4, 1844
Carding machine, wool.....	Nathan Freeman.....	Lowell, Mass.....	Dec. 31, 1830
Carding machine, wool, cotton, &c.....	Ebenezer Crane and Alanson Crane.....	Lowell, Mass.....	Jan. 30, 1841
Carding machine, wool, cotton, &c.....	Joseph Munroe.....	Palmer, Mass.....	Oct. 11, 1841
Carding machine, wool, condenser for.....	Levi L. Gowdy.....	Montgomery, N. Y.....	Oct. 11, 1841
Carding rolls, cotton, forming.....	C. Whiting, S. Lowder, & S. Lowder, jr.....	Dedham, Mass.....	June 25, 1824
Carding, rolls, preserver.....	Charles Atwood.....	Middletown, Ct.....	Nov. 1, 1830
Carding, spinning, and roping.....	T. Norton and G. Biddis.....	Milford, Pa.....	April 15, 1813
Carding and spinning wool.....	Anson Holmes.....	Pomfret, N. Y.....	Jan. 8, 1810
Carding and spinning wool.....	Philo C. Curtis.....	Paris, N. Y.....	Oct. 15, 1823
Carding and spinning machines.....	Moses Chase.....	Baltimore, Md.....	Mar. 23, 1842
Carding wool.....	John Boynton.....	South Coventry, Ct.....	Mar. 11, 1833
Carding wool.....	Calvin Wing.....	Gardiner, Me.....	Oct. 21, 1830
Carding wool.....	David Adams.....	Richmond, Va.....	July 29, 1833
Cards, boards.....	Homer Whittimore.....	Newton, N. Y.....	April 27, 1832
Cards, boards, smoothing.....	Daniel Stearns.....	Brattleborough, Vt.....	Mar. 10, 1814
Cards, and can hoops, bending.....	John Butterworth.....	Philadelphia co., Pa.....	July 20, 1831
Cards, cotton.....	William Barker.....	Smithfield, R. I.....	Aug. 12, 1815
Cards, cotton and wool.....	Edward Faber.....	Pittsburg, Pa.....	Jan. 24, 1832
Cards, cotton and wool, composition for preparing.....	John M. Gates.....	Warren, Mass.....	Sept. 14, 1815
Cards, cut, prick, and set.....	Reuben Merriam.....	Leicester, Mass.....	May 2, 1831
Cards, cylinders.....	Joshua Lamb.....	Leicester, Mass.....	Aug. 21, 1819
Cards, grinding and facing.....	Gideon Drake.....	Windsoor, Ct.....	Feb. 28, 1817
Cards, grinding and straining.....	John Boynton.....	Windham, Ct.....	Mar. 30, 1811
Cards, wool†.....	Amos Whittimore.....	Massachusetts.....	June 5, 1797
Cards, wool.....	George Faber.....	Canton, Ohio.....	Aug. 1, 1838
Carding wool.....	Benjamin Standing.....	New Hampshire.....	June 28, 1803
Carding wool.....	Daniel Smith.....	Philadelphia, Pa.....	June 14, 1809

* Date of English patent, Nov. 17, 1845.

† Antedated Jan. 20, 1846.

‡ Renewed by Cong., Mar. 3, 1860.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN MADE.
Carding wool.....	George Booth.....	Poughkeepsie, N. Y.	Oct. 13, 1842
Carding wool.....	Lewis French.....	New Haven, Ct....	May 18, 1814
Carding wool.....	E. Hale, jr., S. Hale, and James Hale....	Haverhill, Mass....	Feb. 18, 1825
Carpet, canvass, design for.....	J. D. Edwards.....	Elizabethtown, N. J.	Mar. 20, 1844
Carpet, design for.....	John P. Ferguson....	Thompsonville, Ct....	Oct. 20, 1842
Carpet, painted, design for.....	James Albro, jr.....	Elizabethtown, N. J.	Oct. 6, 1843
Carpet, design for.....	Henry G. Thompson..	New York.....	April 4, 1844
Carpet, felt.....	Aaron Byington.....	Herkimer, N. Y....	May 6, 1829
Carpet, ingrain.....	John and N. Haight..	New York.....	Aug. 12, 1820
Carpet, ingrain.....	William A. Prince....	New York.....	Feb. 12, 1823
Carpet, ingrain, taking figures of.	William Sherwood....	Summersworth, N. H.	April 20, 1830
Carpet, paper.....	Francis Guy.....	Baltimore, Md.....	Feb. 23, 1819
Carpet, woollen.....	William Harrington..	Harrison, N. Y....	Mar. 3, 1829
Carpet, woollen.....	William Harrington..	Harrison, N. Y....	June 11, 1829
Carpeting and rugs.....	John Humphreys.....	New York city.....	Dec. 10, 1838
Carpets, weaving.....	William Sherwood....	Ridgefield, Ct.....	July 20, 1846
Cloth, brushing and winding.....	Reuben C. Varnel....	West Somers, N. Y.	Mar. 13, 1844
Cloth, dressing, finishing.....	Zachariah Allen.....	Providence, R. I....	Feb. 23, 1830
Cloth, dressing, singeing.....	A. Robeson.....	New Bedford, Mass.	Sept. 8, 1826
Cloth, dressing, sizing.....	Paul Moody.....	Waltham, Mass....	Jan. 17, 1818
Cloth, dressing, wool and cotton.	Calvin W. Cook.....	Lowell, Mass.....	April 23, 1831
Cloth, dressing.....	Isaac Sanford.....	Connecticut.....	Mar. 27, 1799
Cloth, dressing.....	Seth Hart.....	Hempstead, N. Y....	July 27, 1812
Cloth, dressing.....	Calvin W. Cook.....	Lowell, Mass.....	May 20, 1833
Cloth, dressing.....	Stephen R. Parkhurst.	Mendon, Mass.....	Dec. 23, 1833
Cloth, dressing, calendering.....	Zenos Bliss.....	Johnston, R. I....	Oct. 17, 1835
Cloth, drying.....	Joseph Hurd.....	Boston, Mass.....	Jan. 23, 1830
Cloth, drying, by steam rollers..	Duncan Wright.....	Medway, Mass.....	Aug. 31, 1820
Cloth, felting apparatus.....	John Andrews.....	Bellville, N. J.....	Jan. 31, 1845
Cloth, finisher.....	J. C. Carlisle.....	Armagh, Pa.....	Oct. 21, 1846
Cloth, folding and measuring.....	Joel Spalding.....	Morristown, Vt.....	Aug. 28, 1841
Cloth, folding and measuring, machinery for.....	Silas C. Durgin.....	N. Chelmsford, Mass.	Mar. 9, 1844
Cloth, forming the web without spinning or weaving.....	John Arnold.....	Norwalk, Conn....	July 15, 1829
Cloth, mangle.....	Thomas Rundle.....	Boston, Mass.....	Nov. 11, 1830
Cloth, manufacturing.....	J. P. & R. G. Hazard.	Providence, R. I....	Dec. 6, 1828
Cloth, manufacturing.....	Henry Raymond.....	New York.....	June 27, 1829
Cloth, manufacturing.....	N. Peck & D. Taylor..	Fairfield, Conn....	June 27, 1829
Cloth, manufacturing.....	Freeman Wolcott....	Stow, Mass.....	July 21, 1835
Cloth, manufacturing, of flax and wire.....	Peter Laporte.....	Augusta county, Va.	July 12, 1830
Cloth, machine for measuring on the loom.....	F. W. Howe.....	N. Chelmsford, Mass.	June 6, 1846
Cloth, napping and making water-proof.....	William K. Phipps....	Framingham, Mass.	Aug. 31, 1830
Cloth, ornamenting.....	James C. Wood.....	Philadelphia, Pa....	Dec. 14, 1821
Cloths, printing, floor, design for.	J. Albro, jr.....	Elizabethtown, N. J.	Dec. 20, 1843
Cloths, printing, floor, design for.	J. Albro, jr.....	Elizabethtown, N. J.	Dec. 20, 1843
Cloths, printing, floor, design for.	J. Albro, jr.....	Elizabethtown, N. J.	Dec. 20, 1844
Cloth, &c., reducing worn out....	Reuben Daniels.....	Woodstock, Vt.....	Oct. 10, 1840
Cloth, scouring.....	Thomas L. Jennings..	New York.....	Mar. 3, 1821
Cloth of all kinds, sewing, with a running stitch.....	Benjamin W. Bean....	New York, N. Y....	Mar. 4, 1843
Cloth, stretching, in the process of fulling.....	Baxter D. Whitney & Geo. W. Lawton....	Winchendon, Mass.	Mar. 25, 1840
Cloth, taking wrinkles out of, while fulling.....	John Tillou.....	New Haven, Conn..	Dec. 14, 1840
Cloth of various kinds, manufac'g	Reuben Daniels.....	Woodstock, Vt.....	Oct. 8, 1840
Cloth, washing, in calico printing	Geo. J. Prentiss.....	Tiverton, R. I.....	April 4, 1846
Cloth, winding up.....	J. Goulding and R. Brackett.....	Boston, Mass.....	Nov. 30, 1835
Coach lace, loom, Bigelow's power	E. B. Bigelow.....	Boston, Mass.....	April 20, 1837

* Reissued Jan. 23, 1834.

† Antedated, Oct. 4, 1845.

‡ Reissued Sept. 26, 1846.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCES.	DATE GRANTED.
Cocooneries, lodgments in, &c....	Sol. M. Jenkins, M.D.	Easton, Md.....	Sept. 28, 1839
Cocooneries, removing the filth from hurdles	Benjamin Benson	Smyrna, Del.....	Jan. 10, 1840
Cordage	George Parkinson	Pennsylvania.....	June 16, 1794
Cordage	John Pitman.....	Rhode Island.....	May 25, 1795
Cordage	R. Fulton & N. Cutting	New York.....	Mar. 4, 1808
Cordage	Abel Hill	Walpole, N. H.....	June 30, 1812
Cordage	Charles L. Sargeant....	Suffolk, Mass.....	Oct. 4, 1817
Cordage	St. & James A. Bazen..	Canton, Mass.....	Oct. 17, 1817
Cordage	William B. Leonard....	Fishkill, N. Y.....	Jan. 9, 1819
Cordage	Robert Colbert	Boston, Mass.....	Mar. 17, 1819
Cordage	Robert Graves.....	Boston, Mass.....	April 10, 1819
Cordage	Robert Graves.....	Boston, Mass.....	Nov. 22, 1820
Cordage	Robert Graves.....	Boston, Mass.....	Feb. 1, 1821
Cordage	Franklin Kelsey.....	Middletown, Conn..	Feb. 8, 1825
Cordage	Erastus Bartholomew..	Boston, Mass.....	May 17, 1826
Cordage	Robert Graves.....	Brooklyn, N. Y.....	July 25, 1827
Cordage	John Drummond.....	Brooklyn, N. Y.....	July 22, 1833
Cordage, clothes line, straining and preserving.	E. Allyn and C. B. Hildreth	Boston, Mass.....	Nov. 26, 1840
Cordage, laying and spinning ropes for cables	William Shultz.....	Baltimore, Md.....	June 24, 1809
Cordage, laying and twisting seine twine.....	Joseph Clarkson.....	Baltimore, Md.....	Aug. 16, 1826
Cordage, long, manufacturing....	William E. Maginnis..	Philadelphia, Pa....	Nov. 9, 1839
Cordage, manufacturing.....	Alfred Hathaway.....	Boston, Mass.....	July 9, 1839
Cordage, pressing tar out of.....	Thomas Barnitt.....	Philadelphia, Pa....	May 20, 1822
Cordage, rope	Edward S. Townsend and Philo Durfee..	Palmyra, N. Y.....	Jan. 6, 1831
Cordage, rope	William Stone, jr.....	Williamson co. Tenn	Sept. 8, 1831
Cordage, rope	Daniel Treadwell.....	Boston, Mass.....	Feb. 5, 1834
Cordage and rope	William Fanning.....	New York.....	Feb. 3, 1836
Cordage, rope, forming & laying..	George Bradley.....	Fishkill, N. Y.....	Dec. 16, 1833
Cordage, rope, layer	David Myerle.....	Philadelphia, Pa....	Mar. 3, 1827
Cordage, rope, laying.....	John Goulding.....	Boston, Mass.....	Oct. 10, 1835
Cordage, rope, making.....	Michael Wigglesworth	Massachusetts.....	June 26, 1799
Cordage, rope, making.....	John Sellers & A. Bartle	Alexandria, D. C....	May 5, 1807
Cordage, rope, making.....	Eleazer Crain.....	Springfield, Vt....	Jan. 10, 1820
Cordage, rope, making.....	Stephen Hills, 2d.....	Glastenbury, Conn.	June 11, 1829
Cordage, rope, making.....	J. Whiteman.....	Philadelphia, Pa....	Jan. 15, 1836
Cordage, rope, preserving.—See Composition, Class 4.			
Cordage, rope, Readie's guage plate for	Robert Graves.....	Boston, Mass.....	Dec. 31, 1819
Cordage, rope, reeding.....	A. Boring and William W. Jones.....	Thornville, Ohio...	May 5, 1828
Cordage, rope, serving.....	James Fales.....	New Bedford, Mass.	Aug. 20, 1835
Cordage, rope, serving.....	Adam Montgomery...	New York.....	Mar. 18, 1836
Cordage, rope, serving.....	Charles Parke.....	New York.....	April 13, 1836
Cordage, rope and twine.....	Stephen Gorham.....	Massachusetts.....	Feb. 4, 1860
Cordage, rope and twine.....	John Heaven.....	Montgomery c.h., Va	Aug. 13, 1813
Cordage, rope and twine.....	Sam'l F. Dexter and Sam'l Graves.....	Auburn, N. Y.....	Aug. 24, 1830
Cordage, rope, twisting strand...	Moses Day.....	Roxbury, Mass.....	Feb. 7, 1838
Cordage, rope yarn	John Pitman.....	Medford, Mass.....	Mar. 14, 1817
Cordage, rope yarn, putting up ..	James H. Echols.....	Lynchburg, Va....	Oct. 20, 1836
Cordage, rope yarn, spinning....	John Pittman.....	Rhode Island.....	Dec. 24, 1799
Cordage, rope yarn, spinning....	Nathaniel Cutting....	Washington, N. Y..	Aug. 14, 1806
Cordage, rope yarn, spinning....	Sidney B. Whitlock..	New York.....	Aug. 22, 1834
Cordage, rope yarn, spinning and winding.	Christian Berg & Peter Schermerhorn, jr....	New York.....	July 2, 1811
Cordage, rope yarn, tarring.....	Daniel Treadwell.....	Boston, Mass.....	Aug. 18, 1834
Cordage, small, and seine twine..	Petersburg manufact'g company, assignees of Alson Pond.....	Petersburg, Va.....	May 20, 1830

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCES.	WHEN ISSUED.
Cordage, silk weed for.....	George Smith.....	New York.....	May 28, 1838
Cordage, top sled for.....	Robert Graves.....	Boston, Mass.....	Mar. 28, 1831
Cordage, tow line, &c.....	Aaron Ball.....	Caroline, N. Y.....	Dec. 29, 1831
Cordage, twine, and cord.....	Jacob Sloat.....	Sloatsburg, N. Y.....	Nov. 9, 1839
Cotton bates or laps, making.....	John C. Smith & Geo. C. Kellogg.....	New Hartford, Ct.....	Feb. 20, 1843
Cotton, cleaning.....	Bornet Seguire.....	New York, N. Y.....	July 3, 1843
Cotton, cleaning unginued.....	Robert M. Livingston.....	Mobile, Alabama.....	July 20, 1843
Cotton, cleaning.....	G. F. Saltonstall.....	North Carolina.....	Sept. 2, 1801
Cotton, cleaning.....	G. F. Saltonstall.....	North Carolina.....	May 14, 1803
Cotton, cleaning.....	James Simonds & Jas. McJames.....	Charleston, S. C.....	May 17, 1804
Cotton, cleaning.....	George T. Sadler.....	Lawrence co. Ala.....	Mar. 10, 1823
Cotton, cleaning.....	Jesse Reed.....	Marshfield, Mass.....	Feb. 3, 1826
Cotton, cleaning, Sea Island.....	Amos Gilliam.....	Reedy Fork, S. C.....	Oct. 10, 1829
Cotton, inspecting machine.....	Jesse Reed.....	Marshfield, Mass.....	Aug. 10, 1827
Cotton, manufacture.....	Lewis Viales.....	New Orleans, La.....	Oct. 29, 1818
Cotton manufacture.....	John T. Sharrock.....	Winchester, Va.....	June 20, 1823
Cotton; roping.....	Elisha Congdon.....	Norwich, Conn.....	Mar. 12, 1824
Cotton roving, laying in cans*.....	Jesse Whitehead.....	Manchester, Va.....	June 24, 1839
	John Tatham & David Cheetham.....	Rockdale, England.....	Nov. 18, 1845
Cotton, separating trash from.....	Jacob Idler.....	Philadelphia, Pa.....	Dec. 31, 1838
Cotton, improvement in spinning.....	Waring, Peterson and Johnson, adm's of A. S. Wolcott, deceased	New York, N. Y.....	Aug. 8, 1846
Cotton, wadding.....	James Beaumont.....	Kendall, Mass.....	Dec. 3, 1814
Cotton, wadding.....	John Park & William S. Peck.....	Westmoreland, N. Y.....	July 19, 1833
Cotton, wadding, glazing, pelisse|	Stukely Turner.....	Cranston, R. I.....	July 25, 1833
Cotton wadding or batting, manu- facture of.....	Jeremiah Essex.....	Beanington, Vt.....	Feb. 10, 1846
Cotton, wadding, machine for.....	Oliver Tenny.....	Dorchester, Mass.....	Jan. 10, 1845
Cotton waste or rags, &c., dressing	Emery Smith.....	N'th Sudbury, Mass.....	Sept. 10, 1840
Cotton whippers and cleaners.....	Jane A. Davis, adm'x of Henry G. Davis, dec'd	Clark county, Ala.....	May 16, 1845
Cotton, wool, &c., burring and cleaning.....	Silas G. Mumford.....	N. Providence, R. I.....	Mar. 28, 1844
Doffer.....	Stephen H. Parkhurst.....	Providence, R. I.....	Oct. 10, 1835
Doffer, circulating and transverse.	Charles Atwood.....	Middletown, Conn.....	April 18, 1829
Fabrics, figured, manufacturing.....	John Smith.....	Shaefferstown, Pa.....	Aug. 4, 1834
Fabrics, reducing.....	John Biddis.....	Pennsylvania.....	May 6, 1800
Fabrics.—See Class 22, India Rubber.			
Fabrics, water proofing.....	George John Newbery	Citizen U. States, now in London, Engla'd	Mar. 3, 1841
Fabrics, water proofing.....	Thomas B. Rogers.....	New York.....	Nov. 3, 1841
Felt, manufacturing.....	J. Barker and L. Kins- ley.....	Green county, N. Y.....	Aug. 29, 1829
Felt, manufacturing, for bottoms of vessels.....	Thomas R. Williams.....	Newport, R. I.....	May 22, 1830
Felt, papermaker's, washing and cleansing.....	Samuel E. Foster.....	Brattleborough, Vt.....	May 25, 1832
Felt, washer.....	William Cole.....	Lee, Mass.....	Jan. 23, 1833
Felting cloth.....	Oliver Barret, jr.....	Troy, N. Y.....	Dec. 8, 1812
Felting and fulling.....	John D. Lounsbury, J. Arnold, J. A. McLean, and G. G. Bishop.....	Norwalk, Conn.....	July 15, 1829
Felting of wool, without spinning or weaving.....	Levi Van Hoesen.....	Norwalk, Conn.....	June 27, 1829
Felting, for coats, hats.....	Marynaluke Osborne.....	New York, N. Y.....	May 28, 1842
Felt making, in the manufacture of fur hats.....	Hezekiah S. Miller.....	Philadelphia, Pa.....	March 5, 1839
Felt cloths, hardening.....	Henry A. Wells.....	New York.....	Sept. 18, 1841

* Patented in England March 14, 1844. † Reissued Oct. 6, 1835. ‡ Antedated May 12, 1840.

INVENTIONS OR DISCOVERIES.	PATENTERS.	PLACES.	DATES.
Male cloths and hat bodies, shrinking.....	Henry A. Wells.....	New York.....	Sept. 11, 1841
Felt cloths, planking.....	Henry A. Wells.....	New York.....	Sept. 18, 1841
Felt cloths, without spinning and weaving, machinery for.	Thomas R. Williamson	Citizen U. States, new in London, Engla'd	Dec. 14, 1840
Figures to be stamped or painted on fabrics, design for.....	Sparkman and Kelsey	New York, N. Y....	July 25, 1846
Flannels, wetting.....	Joseph W. Hale.....	Haverhill, Mass....	April 2, 1841
Flax, breaking.....	John Cannon.....	Delaware.....	Jan. 17, 1801
Flax, breaking.....	Samuel Davison.....	Romulus, N. Y.....	May 17, 1822
Flax, breaking.....	Pierson Reading.....	Trenton, N. J.....	Jan. 3, 1825
Flax, breaking and dressing.....	Samuel Mulliken.....	Philadelphia, Pa....	Mar. 11, 1791
Flax, breaking and dressing, and thrashing, and grinding.....	Joseph Briggs.....	Schoharie, N. Y....	Oct. 5, 1825
Flax dresser.....	Francis Burdick.....	Kortwright, N. Y....	Feb. 28, 1825
Flax dresser.....	William Wheeler.....	Warren, N. Y.....	Mar. 26, 1825
Flax dressing.....	Elisha Mark.....	.....	Mar. 21, 1806
Flax dressing.....	Jonathan Barlow.....	Granville, Mass....	Aug. 23, 1809
Flax dressing.....	Oliver Wilde.....	Canaan, N. Y.....	April 16, 1810
Flax dressing.....	John Hawes.....	Hudson, N. Y.....	June 19, 1812
Flax dressing.....	Joseph Hines and William Bain.....	New York.....	Aug. 12, 1836
Flax dressing.....	Henry Schoonhoven.....	Pultney, N. Y.....	Dec. 11, 1837
Flax and hemp, bleaching.—See Class 4.	Ferdinando Stith.....	Franklin, Tenn.....	April 22, 1835
Flax and hemp, breaking.....	John Warren.....	Westbrook, Maine....	June 14, 1837
Flax and hemp, breaking.....	Harvey Lull.....	Ithaca, N. Y.....	June 14, 1837
Flax and hemp, breaking.....	Andrew Forsyth.....	Columbia, Tenn.....	Jan. 9, 1838
Flax and hemp, breaking.....	Alvin Keyes.....	Crittenden, Ky.....	April 4, 1838
Flax and hemp, breaking and cleaning.....	Arnold Zellnor.....	Pulaaki, Tenn.....	July 26, 1838
Flax and hemp, breaking and cleaning.....	David M. Longley and Samuel Davis.....	Westbrook, Maine....	Sept. 21, 1837
Flax and hemp, breaking and dressing.....	Lafayette Tibbits.....	New Glasgow, Va....	Oct. 22, 1831
Flax and hemp, breaking and dressing.....	Ebenezer C. Chase.....	Jay, Maine.....	Jan. 6, 1832
Flax and hemp, breaking and dressing.....	Arnold Zellnor.....	Giles county, Tenn..	Oct. 25, 1832
Flax and hemp, breaking and dressing.....	Chapman Warner, A. T. Mixell, and Edwin J. Horn.....	Belvidere, N. J.....	July 31, 1837
Flax and hemp, breaking, and shelling corn.....	Reynolds Gillman.....	New York.....	Nov. 5, 1824
Flax and hemp, breaking and thrashing.....	Noah G. Hayden.....	Harrodsburg, Ky....	April 12, 1838
Flax and hemp, cleaning and breaking.....	Robert Miller.....	Glasgow, Ky.....	May 23, 1834
Flax and hemp, cleaning machine	Hezekiah Hawley.....	Louisville, Ky.....	June 29, 1833
Flax and hemp, combing.....	Jos. and James Westerman.....	New York.....	Aug. 14, 1833
Flax and hemp, dresser.....	E. H. Nichols and Thaddeus Fairbanks	St. Johnsbury, Vt....	Oct. 1, 1836
Flax and hemp, dressing.....	Platt Wakelee.....	Augusta, N. Y.....	April 16, 1834
Flax and hemp, dressing.....	Abel Smith and James Olney.....	Westmoreland, N.Y..	July 10, 1830
Flax and hemp, dressing.....	Hezekiah Hawley.....	Louisville, Ky.....	June 4, 1833
Flax and hemp, dressing.....	Wm. and R. Brittain.	Armwell, N. J.....	Oct. 12, 1837
Flax and hemp, dressing, wheel for	C. and W. A. Benton.	Armenia, N. Y.....	May 22, 1816
Flax and hemp, &c., hatching..	Daniel Treadwell.....	Boston, Mass.....	Aug. 18, 1834
Flax and hemp, &c., hatching..	Foster Demasters.....	Shelbyville, Ky....	Nov. 20, 1836
Flax and hemp, and manilla grass, combing.....	S. Couillard, jr.....	Boston, Mass.....	Oct. 19, 1826
Flax and hemp machine.....	Samuel Mulliken.....	Philadelphia, Pa....	Jan. 15, 1795

* Antedated Mar. 23, 1846.

INVENTORS OR DISCOVERERS.	PATENTERS.	LOCATIONS.	WHEAT PATENTS.
Flax and hemp machine.....	Benjamin Tyler.....	New Hampshire.....	Feb. 28, 1833
Flax and hemp machine.....	Hez. Betts.....	Connecticut.....	May 3, 1833
Flax and hemp machine.....	Owen Roberts.....	Pennsylvania.....	April 12, 1834
Flax and hemp machine.....	Richard Button.....	Cazenovia, N. Y.....	Feb. 11, 1807
Flax and hemp machine.....	Thomas Cahoon.....	Cazenovia, N. Y.....	April 13, 1808
Flax and hemp machine.....	Richard S. Chappell.....	Pawlet, N. Y.....	Jan. 18, 1809
Flax and hemp machine.....	Eli F. Hill.....	Fabius, N. Y.....	Feb. 11, 1809
Flax and hemp machine.....	Nathaniel P. Robinson.....	Fleming county, Ky.....	Aug. 31, 1810
Flax and hemp machine.....	Edward Rumsey.....	Christian co., Ky.....	April 26, 1811
Flax and hemp machine.....	John C. Johnson.....	Fayette county, Ky.....	May 16, 1811
Flax and hemp machine.....	Robert Miller.....	Lexington, Ky.....	July 13, 1811
Flax and hemp machine.....	J. A. Dana.....	Cazenovia, N. Y.....	July 23, 1811
Flax and hemp machine.....	William Harper.....	Richmond, Va.....	Oct. 15, 1811
Flax and hemp machine.....	Archibald Tanner.....	Lexington, Ky.....	Oct. 24, 1811
Flax and hemp machine.....	Ira Millard.....	Kent, Conn.....	May 6, 1813
Flax and hemp machine.....	William Van Duzer.....	Warwick, N. Y.....	June 30, 1818
Flax and hemp machine.....	Francis Hall.....	Tennessee.....	Oct. 7, 1813
Flax and hemp machine.....	G. H. Ricketts and John Kinney, jr.....	Mount Pleasant, N. J.....	July 12, 1814
Flax and hemp machine.....	G. H. Ricketts and John Kinney, jr.....	Morristown, N. J.....	Oct. 24, 1814
Flax and hemp machine.....	Thomas Pullen.....	Lexington, Ky.....	June 20, 1816
Flax and hemp machine.....	David Melville.....	Newport, R. I.....	Nov. 18, 1818
Flax and hemp machine.....	Henry Burden.....	Albany, N. Y.....	June 15, 1822
Flax and hemp machine.....	William Cumberland.....	New York.....	July 3, 1822
Flax and hemp machine.....	James McDonald.....	New York.....	Aug. 31, 1822
Flax and hemp machine.....	Naman Goodsell.....	Paris, N. Y.....	Sept. 19, 1822
Flax and hemp machine.....	James McDonald.....	New York.....	Jan. 18, 1823
Flax and hemp machine.....	Joseph Hines and William Bain.....	Columbus, Ohio.....	Feb. 3, 1823
Flax and hemp machine.....	Frederick Cox.....	Somerville, N. J.....	Dec. 4, 1823
Flax and hemp machine.....	Benjamin Lewis.....	Ligonis, Maine.....	Jan. 26, 1824
Flax and hemp machine.....	Erastus Kellogg.....	Palmyra, N. Y.....	May 11, 1824
Flax and hemp machine.....	William C. Davison.....	Pittsford, N. Y.....	June 22, 1824
Flax and hemp machine.....	Franklin Kelsey.....	Middletown, Conn.....	Nov. 26, 1824
Flax and hemp machine.....	T. S. and A. Barnum.....	New York.....	Nov. 27, 1824
Flax and hemp machine.....	John C. Wenzell.....	Louisville, Ky.....	Jan. 17, 1828
Flax and hemp machine.....	Evans Christian.....	Philadelphia, Pa.....	Feb. 8, 1828
Flax and hemp machine.....	Amos Salisbury.....	Troy, N. Y.....	April 15, 1829
Flax and hemp machine.....	Amos Salisbury and J. C. Longdon.....	Troy, N. Y.....	April 18, 1829
Flax and hemp machine.....	J. Y. Watson, J. Blossom, and A. Burnett.....	Salem, N. Y.....	April 21, 1829
Flax and hemp machine.....	Thomas Cahoon.....	Troy, N. Y.....	April 25, 1829
Flax and hemp machine.....	Reuben Medley.....	Bloomfield, Ky.....	June 11, 1829
Flax and hemp machine.....	H. L. Barnum and M. Stephenson.....	Cambridge, N. Y.....	July 8, 1829
Flax and hemp machine.....	Amos Salisbury and J. C. Longdon.....	Troy, N. Y.....	July 29, 1829
Flax and hemp machine.....	Lafayette Tibbits.....	New Glasgow, Va.....	Aug. 1, 1829
Flax and hemp machine.....	J. L. F. Roumage.....	New York.....	Aug. 6, 1829
Flax and hemp machine.....	William K. Scott.....	Sandy Hill, N. Y.....	Feb. 11, 1830
Flax and hemp machine.....	John Rich, jr.....	Troy, N. Y.....	May 20, 1830
Flax and hemp machine.....	Daniel Ball.....	Sandy Hill, N. Y.....	July 7, 1830
Flax and hemp machine.....	Robert McCormick.....	Rockbridge co., Va.....	Oct. 1, 1830
Flax and hemp machine.....	Joel Dewey, jr.....	Troy, N. Y.....	Nov. 25, 1830
Flax and hemp, preparing.....	Wm. Pickingsbottom.....	New York.....	July 12, 1816
Flax and hemp, preparing.....	John Goulding.....	Boston, Mass.....	Aug. 17, 1835
Flax and hemp, preparing for spinning.....	John Owings.....	Baltimore, Md.....	Mar. 5, 1812
Flax and hemp, preparing for spinning.....	Pinder Antrim.....	Philadelphia, Pa.....	Nov. 25, 1814
Flax and hemp, rotting by steam.....	Achilles Chinn.....	Harrison county, Ky.....	Dec. 28, 1826
Flax and hemp, and tow hatching.....	John Goulding.....	Boston, Mass.....	Oct. 10, 1835

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	DATE GRANTED.
Flax and hemp, unrotted, machine for.....	William Cumberland.	New York.....	Nov. 29, 1832
Flax machine.....	J. Halladay, T. Eldridge, C. Gibbs, and J. D. Smith.....	Hartford, N. Y.....	Mar. 4, 1839
Flax and hemp, breaking.....	John P. Fry.....	Pulaski, Tenn.....	Dec. 21, 1842
Flax and hemp, breaking and cleaning.....	William McMillen... J. C., G. W., and C. E. Geissendorff.....	Ripley, Ohio.....	Sept. 3, 1842
Flax and hemp, cleaning and dressing.....		Cincinnati, Ohio....	Nov. 28, 1842
Flax and hemp, cleaning and hatching.....	Charles Learned.....	St. Louis, Mo.....	Oct. 22, 1842
Flax and hemp, breaking.....	F. M. Barnes.....	Lexington, Mo.....	Jan. 10, 1843
Flax and hemp, breaking and cleaning.....	John Godden.....	Pittsburg, Iowa Ter.	Jan. 20, 1843
Flax and hemp, breaking and cleaning.....	William N. Stewart..	May's Lick, Ky....	Feb. 4, 1843
Flax and hemp, breaking and scutching.....	Henry Johnson.....	Maysville, Ky.....	Mar. 4, 1843
Flax and hemp, preparing, preparatory to the various processes of cleaning and separating the fibres.....	Sands Olcott.....	New Hope, Pa.....	Mar. 31, 1840
Flax and hemp, reducing the fibres of.....	Sands Olcott.....	Philadelphia, Pa....	April 11, 1840
Flax, swingling.....	Samuel Achey.....	Heidelberg t'nsip, Pa.	Feb. 18, 1838
Flier and bobbing for twisting silk.....	Oliver Ellsworth....	Hartford, Ct.....	July 12, 1839
Flier for twisting silk.....	Edward L. Young....	Norfolk, Va.....	Oct. 8, 1840
Flocks, machine for cutting.....	Asa Barber.....	Stephentown, N. Y.	Nov. 18, 1846
Fulling cloth.....	M. W. Northrop and R. R. Dillon.....	Newton, N. J.....	Dec. 4, 1828
Fulling cloth, by steam.....	Ross Winans.....	Warwick, N. Y.....	June 26, 1831
Fulling mill.....	Asa Danielson.....	Otego, N. Y.....	May 16, 1815
Fulling mill.....	Martin Lee.....	Otego, N. Y.....	Nov. 6, 1817
Fulling mill, double crank.....	Levi Osborne.....	Fairfield, Ct.....	July 12, 1804
Fulling mill, and power loom.....	Anson Atwood.....	Salem, N. Y.....	Oct. 1, 1830
Fulling mill, stocks, propelling.....	Elisha O. Norris....	Monmouth, Me....	July 7, 1835
Fulling mill, and washing.....	John Kennion.....	Dutchess co., N. Y.	Mar. 26, 1806
Fulling and scouring cloth.....	Horace Hickox.....	Rutland, N. Y.....	Mar. 26, 1836
Fulling and scouring, and making carpeting.....	Harvey Slayton.....	Lockport, N. Y....	Nov. 25, 1829
Fulling mill.....	Sidney E. Coleman...	West Haven, Vt...	June 11, 1841
Furs, process of blowing & cleaning.....	John W. Cochran....	New York, N. Y....	Nov. 4, 1842
Fur, blower.....	William R. Rotch....	New Bedford, Mass.	Mar. 9, 1834
Fur, blower.....	Shepherd Whitman..	New Albany, Ia....	Mar. 22, 1834
Fur, cleaning.....	William Woodworth..	New York.....	April 19, 1831
Fur, cutting.....	Martin Clark.....	New York.....	April 21, 1810
Fur, cutting.....	Eleazer Sprague.....	Danbury, Ct.....	May 9, 1810
Fur, cutting.....	David Beard.....	Guilford, N. C....	April 30, 1816
Fur, cutting.....	Jer. Hubbard.....	Jamestown, N. C...	Nov. 4, 1836
Fur, cutting.....	Michael Petre.....	Womelsdorf, Pa....	Dec. 20, 1837
Fur, cutting.....	Charles C. K. Beach.	Portland, Me.....	Nov. 10, 1837
Fur, cutting, and cloth shearing.....	Benjamin Marshall & D. Johnson.....	Concord, N. H.....	Dec. 7, 1816
Fur, cutting machine, reciprocating.....	Curtis M. Lampson..	New York.....	Feb. 5, 1835
Fur, cutting from pelt.....	Denison Williams....	New York.....	Oct. 25, 1838
Fur, cutting from peltry.....	Joshua Witherle....	Boston, Mass.....	May 28, 1811
Fur, cutting from peltry.....	Ephraim Cutter.....	Walpole, N. H.....	Feb. 4, 1813
Fur, cutting from peltry.....	William Jackson.....	Burlington, N. J....	Feb. 2, 1815
Fur, cutting from skins.....	Ira Ives.....	Bristol, Ct.....	May 19, 1812
Fur, cutting from skins.....	Samuel Johnson.....	Walnut Lane, N. C.	Feb. 24, 1837
Fur, extracting hair from.....	Sam'l G. Ladd, ass'ee of Seth Graham.....	Farmington, Me....	Mar. 27, 1835

MANUFACTURER OR DISCOVERER.	PATENTEE.	MANUFACTURED.	WHEAT ISSUED.
Fur, extracting from skins, and manufacturing it in yarn.	Levi Ward, ass'ee of Phebe Atwell.....	Waltham, N. Y.	April 30, 1834
Fur, pulling from peltry.....	William Jackson.....	Burlington, N. J.	Feb. 2, 1815
Fur, separating from hair.....	C. Lockwood, R. Lockwood, & J. Arnold..	Fairfield, Ct.	Dec. 4, 1832
Fur, substitute for dressed fur skins	Allen Belden.....	Hudson, N. Y.	April 22, 1835
Gin, cotton.....	Eli Whitney.....	Massachusetts.....	Mar. 14, 1794
Gin, cotton.....	Hodgen Holmes.....	Georgia.....	May 12, 1796
Gin, cotton.....	Robert Watkins.....	Georgia.....	Dec. 23, 1796
Gin, cotton.....	John Murray.....	Georgia.....	Dec. 23, 1796
Gin, cotton.....	Eben Whiting.....	Massachusetts.....	Jan. 22, 1801
Gin, cotton.....	Wm. Bell & Sam'l D. Montmollen.....	Georgia.....	April 7, 1802
Gin, cotton.....	Wm. Bell and J. S. D. Montmollen.....	Georgia.....	Mar. 7, 1803
Gin, cotton.....	William Bell.....	Pennsylvania.....	Nov. 24, 1803
Gin, cotton.....	John McBride.....	Nashville, Tenn.	Aug. 8, 1805
Gin, cotton.....	Obed Crawford.....	June 22, 1807	
Gin, cotton.....	Robert Hancock, sen., & Edward W. Carr.	Philadelphia, Pa.	Feb. 6, 1811
Gin, cotton.....	Isaiah Jennings.....	New York.....	Dec. 27, 1815
Gin, cotton.....	Engelhart Cruse.....	Charleston, S. C.	Nov. 18, 1816
Gin, cotton.....	Isaiah Jennings.....	New York.....	Jan. 17, 1817
Gin, cotton.....	Samuel Pennoyer.....	Cross Rivers, N. Y. ..	July 24, 1822
Gin, cotton.....	Eleazer Carver, jun..	Bridgewater, Mass.	June 13, 1823
Gin, cotton.....	J. and T. Leavitt.....	Comfort Lane, Suffolk, Ct.	Mar. 24, 1825
Gin, cotton.....	Isaac B. Barnes.....	Beaufort, S. C.	Nov. 6, 1826
Gin, cotton.....	David Phillips.....	Jefferson co., Miss.	April 3, 1829
Gin, cotton.....	S. T. Conn.....	New York.....	June 11, 1829
Gin, cotton.....	Samuel Sawyer.....	Boston, Mass.	Mar. 30, 1833
Gin, cotton.....	James Lynch.....	Tuscaloosa, Ala.	July 22, 1833
Gin, cotton.....	Jacob Perkins.....	Bridgewater, Mass.	June 14, 1834
Gin, cotton.....	W. & J. McCreight..	Winsborough, S. C.	Feb. 5, 1836
Gin, cotton.....	Henry Clark.....	New London, Ct.	Feb. 25, 1836
Gin, cotton.....	Pierson Reading.....	Trenton, N. J.	April 13, 1836
Gin, cotton.....	James McCreight.....	Winsborough, S. C.	July 2, 1836
Gin, cotton.....	Alexander Jones.....	New Orleans, La.	April 25, 1837
Gin, cotton.....	Goodell, Brown, Tracy & Moseley, ass'nes of J. Stevens.....	Poughkeepsie, N. Y. ..	Nov. 25, 1837
Gin, cotton.....	Lucilius H. Mosely.....	Poughkeepsie, N. Y. ..	Nov. 25, 1837
Gin, cotton.....	Wm. Whittemore, jr..	W. Cambridge, Mass.	May 25, 1839
Gin, cotton.....	Henry Conklin.....	Poughkeepsie, N. J.	June 7, 1839
Gin, cotton.....	John Beath.....	Boston, Mass.	July 12, 1839
Gin, cotton.....	Fones McCarthy.....	Demopolis, Ia.	July 3, 1840
Gin, cotton.....	Lewis G. Sturdevant..	Delaware, Ohio.....	July 22, 1841
Gin, cotton.....	William P. Baker.....	Boston, Mass.	Nov. 20, 1838
Gin, cotton, boxing for.....	William S. Cooley.....	Norwich, Ct.	Jan. 7, 1835
Gin, cotton, constructing & affixing the ribs or grates of saw-gins*	Asa Copeland, jr.	Bridgewater, Mass.	April 8, 1840
Gin, cotton, feeder.....	Joseph Ewbank, jr.	Glasgow, Ky.	July 29, 1838
Gin, cotton, foot.....	William Gould.....	McIntosh co., Ga.	Feb. 28, 1821
Gin, cotton, frame.....	Eben. A. Lester.....	Boston, Mass.	Jan. 8, 1831
Gin, cotton, grates of saw-gin...	Albert Washburn.....	Bridgewater, Mass.	June 16, 1841
Gin, cotton, grates.....	Edwin Keith.....	Bridgewater, Mass.	Mar. 4, 1836
Gin, cotton, hopper.....	G. F. Saltonstall.....	Fayetteville, N. C.	Dec. 31, 1817
Gin, cotton, improvement in.....	Peter Von Schmidt.....	Washington, D. C.	Oct. 17, 1846
Gin, cotton, improvement in.....	Edwin Keith.....	Bridgfield, Mass.	Dec. 22, 1846
Gin, cotton, in the roller.....	Rich'd Reynolds, jr..	Beaufort, S. C.	Feb. 2, 1844
Gin, cotton, propelling.....	Peter Knox.....	Augusta, Ga.	Dec. 7, 1826
Gin, cotton, railroad.....	David Phillips.....	Georgetown, Pa.	May 22, 1841
Gin, cotton, roller.....	Wm. Whittimore and Wm. Whittemore, jr.	West Cambridge...	Mar. 21, 1833

* Reissued Feb. 12, 1842.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN MADE.
Gin, cotton, roller.....	Samuel Sawyer.....	Boston, Mass.....	Mar. 30, 1833
Gin, cotton, roller.....	Wm. Whitmore, jr.....	W. Cambridge, Mass.....	Mar. 7, 1834
Gin, cotton, roller.....	Wm. Whitmore, jr.....	W. Cambridge, Mass.....	May 29, 1835
Gin, cotton, roller.....	Eleazer Carver.....	Bridgewater, Mass.....	Sept. 27, 1838
Gin, cotton, roller.....	Theodore Ely.....	New York.....	Dec. 11, 1845
Gin, cotton, roller, ginning long staple cotton.....	Eleazer Carver.....	Bridgewater, Mass.....	Jan. 17, 1842
Gin, cotton, saw cylinder for.....	Jacob Idler.....	Philadelphia, Pa.....	Dec. 1, 1837
Gin, cotton, saw cylinder for.....	Alexander Jones.....	New York, N. Y.....	July 20, 1842
Gin, cotton, saw-gin for ginning cotton.....	C. A. McPhetridge.....	Natchez, Miss.....	April 24, 1841
Gin, cotton, saw for ginning cotton	Theodore J. James.....	Princeton, Mass.....	May 7, 1842
Gin, saw, ginning cotton.....	Hilary H. Kelley.....	Port Gibson, Miss.....	May 19, 1843
Gin, saw, ginning cotton.....	William B. Stewart.....	Cincinnati, Ohio.....	May 19, 1843
Gin, cotton, saw-gin for ginning cotton.....	Eleazer Carver.....	Bridgewater, Mass.....	April 4, 1844
Gin, cotton, saw-gin for ginning cotton.....	John H. Sherard.....	Livingston, Ala.....	April 30, 1844
Gin, cotton, saw.....	G. F. Seltonstall.....	North Carolina.....	Jan. 4, 1863
Gin, cotton, saw.....	Phineas Gardner.....	Woodville, Mass.....	April 22, 1830
Gin, cotton, saw.....	Eleazer Carver.....	Bridgewater, Mass.....	Jan. 4, 1845
Gin, cotton, saw and grates for..	Eleazer Carver, jr.....	Bridgewater, Mass.....	June 12, 1823
Gin, cotton, saw ribs for.....	Eleazer Carver.....	Bridgewater, Mass.....	June 12, 1836
Gin, cotton and wool.....	Stephen R. Parkhurst.....	New York.....	May 1, 1845
Hair cloth.....	William Shotwell and Arthur Kinder.....	New York.....	July 23, 1813
Hair, curled, carding, and picking	Francis Harding.....	Cleveland, Ohio.....	Aug. 25, 1845
Hair, extracting from fur, &c....	Ephraim Cutter.....	Brattleborough, Vt.....	Mar. 1, 1860
Hair, extracting from fur, &c....	Ephraim Cutter.....	Walpole, N. H.....	Feb. 12, 1816
Hair, extracting from fur, &c....	John Hollingshead and Daniel Baker.....	Trenton, N. J.....	Aug. 19, 1813
Hair, extracting from skins.....	Nahum Swett.....	Redfield, Maine.....	Nov. 14, 1835
Hair, hatcheling.....	William Chubb.....	New York.....	July 9, 1829
Hair, picking, curled.....	John Thompson, 3d.....	Essex county, Mass.....	July 8, 1834
Hair, picking, &c., for mattresses	Asahel Green and J. S. Osgood.....	Hamilton, N. Y.....	Dec. 18, 1838
Hair, pulling from skins.....	Nicholas Young.....	Pennsylvania.....	June 28, 1866
Hair, seating, weaving.....	Charles R. Harvey.....	Poughkeepsie, N. Y.....	Nov. 25, 1837
Hair, separating from fur.....	John McDonald.....	New York.....	Sept. 11, 1837
Hair, separating from skins.....	Samuel Brooks.....	New York.....	April 4, 1822
Hair, shaving from deer skins...	Rodolph Groning.....	New Orleans, La.....	Oct. 10, 1831
Hatcheling machine.....	James Patterson.....	Southampton, N. Y.....	Dec. 7, 1805
Hat blocks.....	A. and S. Chichester.....	Wilton, Conn.....	May 29, 1835
Hat, blocking.....	David Beard.....	Guilford, N. C.....	May 28, 1816
Hat, blocking.....	W. W. Jameson.....	Wheeling, Ohio.....	Mar. 30, 1836
Hat, bodies.....	H. F. West and A. F. Stevens.....	Richland, N. Y.....	Oct. 29, 1826
Hat, bodies.....	Benjamin Lapham and E. Cady.....	Canaan, N. Y.....	April 15, 1829
Hat, bodies.....	A. Clarke & H. Chase.....	Falmouth, Mass.....	June 11, 1829
Hat, bodies.....	Levi Van Hoesen.....	Norwalk, Conn.....	June 19, 1829
Hat, bodies.....	William Nuns.....	New York.....	Aug. 14, 1834
Hat, bodies.....	Hugh Moore.....	New York city.....	April 20, 1837
Hat, bodies.....	Henry A. Wells, J. James, & R. W. Peck.....	Brooklyn, N. Y.....	Sept. 20, 1837
Hat-bodies, fabrics for.....	Isaac L. Chapman.....	New York.....	May 1, 1845
Hat-bodies, mode of forming.....	Marmaduke Osborne.....	New York.....	Nov. 11, 1845
Hats, bodies, bats.....	Stephen Hurlbut.....	Glastonbury, Conn.....	Feb. 14, 1831
Hats, bodies, batting or web for..	Thomas Blanchard.....	New York city.....	June 14, 1837
Hats, bodies, batting or web for..	Henry A. Wells, Jas. James, and Robert W. Peck.....	Brooklyn, N. Y.....	Sept. 22, 1837
Hats, bodies, forming.....	Orlando Root.....	Montgomery co. N. Y.....	Dec. 19, 1839
Hats, bodies, forming.....	A. H. Stevens.....	Richland, N. Y.....	Jan. 27, 1839

* Reissued Nov. 16, 1839.

MANUFACTURE.	PATENTEE.	MANUFACTURE.	DATE ISSUED.
Hats, bodies, forming.....	Seth Graham.....	Fayette, Maine.....	May 15, 1822
Hats, bodies, machinery.....	Daniel Tenny.....	Plattsburg, N. Y.....	Oct. 1, 1822
Hats, bodies, setting up.....	Joseph Grant.....	Providence, R. I.....	April 28, 1825
Hats, bodies, stiffening.....	Henry Blynn.....	Newark, N. J.....	May 9, 1825
Hats, bodies, stiffening.....	J. P. Kettell and J. Wright.....	Worcester co. Mass.....	June 11, 1836
Hats, bodies, stiffening.....	E. P. Spear.....	Lexington, Mass.....	July 2, 1836
Hats, bodies, winding and setting up.....	Joseph Grant.....	Providence, R. I.....	April 10, 1827
Hats, bonnets, &c.....	Elisha Pratt.....	Cambridge, Mass.....	May 16, 1835
Hats, bonnets, &c., bark for.....	Sylvester G. Whipple.....	Hallowell, Mass.....	April 17, 1807
Hats, bonnets, cutting chips for.....	Amos D. Allen and A. Kelsey.....	Windham, Conn.....	Sept. 5, 1804
Hats, bonnets, of grass.....	Garden Wells & Sophia Wells.....	Wethersfield, Conn.....	Dec. 29, 1821
Hats, bonnets, &c., ironing and pressing.....	Richard Murdock.....	Baltimore, Md.....	June 17, 1840
Hats, bonnets, &c., straw, pressing and finishing.....	William Chaplin.....	New York.....	Sept. 10, 1840
Hats and bonnets.....	Jonathan Dennis.....	Portsmouth, R. I.....	May 8, 1843
Hats and bonnets of horse hair.....	Charles L. Noe.....	New York.....	July 20, 1843
Hats and bonnets, machine for pressing.....	Caleb Merritt.....	Baltimore, Md.....	Mar. 13, 1844
Hats, bowing, gearing cones.....	Truman F. Mayhew.....	Boston, Mass.....	Aug. 22, 1827
Hats, bowing wool for.....	H. S. Holladay and E. G. Griffin.....	Lyme, Conn.....	June 6, 1812
Hats, bowing wool, &c.....	Edward C. Griffin.....	Lyme, Conn.....	Aug. 10, 1815
Hats, bowspring for.....	Daniel Nichols.....	New Milford, Conn.....	March 1, 1809
Hats, buoyant, used as life-preservers.....	Sarauel White White.....	England.....	Oct. 14, 1840
Hats, carding.....	Josiah C. Seely.....	Dutchess co., N. Y.....	Mar. 15, 1827
Hats, carding.....	Isaac Sanford.....	Brockley, Pa.....	Oct. 19, 1828
Hats, cassimere.....	Oliver Brooks and Jas. A. Sloan.....	Philadelphia, Pa.....	Nov. 9, 1842
Hats, cemented.....	Nathan Weston.....	Reading, Mass.....	May 24, 1816
Hats, chip.....	Amos D. Allen.....	Windham, Conn.....	May 10, 1804
Hats, coloring.....	George M. Johnson.....	Port Deposit, Md.....	Dec. 31, 1839
Hats, coloring.....	Joel Taylor.....	Danbury, Conn.....	Nov. 20, 1823
Hats, coloring and cooling.....	Richard Pike.....	Wilton, Conn.....	Jan. 23, 1834
Hats and furs, coloring.....	Harmon Hibbard.....	Atica, N. Y.....	May 25, 1838
Hats.—See Composition, Class 4.			
Hats, drying.—See Dying, Class 4.			
Hats, elastic, ventilating.....	Daniel Greenleaf.....	Vicksburg, Miss.....	Nov. 26, 1836
Hats, equalizing and polishing nap of.....	John Lowdon & Thos. Shaw.....	New York.....	May 7, 1845
Hats, felting and napping.....	Thomas J. Cornell.....	Randolph, Vt.....	Feb. 11, 1831
Hats, finishing.....	J. Cooper & P. Barnett.....	Philadelphia, Pa.....	May 31, 1826
Hats, &c., leghorn, finishing.....	Joseph Snyder.....	Philadelphia, Pa.....	Aug. 21, 1834
Hats, forming, wool and rorum.....	John Warely.....	Albany, N. Y.....	Oct. 14, 1813
Hats, frame for.....	Richard Gookins.....	New Hampshire.....	Jan. 24, 1806
Hats, fur, preparing.....	George Cleveland.....	Hartford, Ct.....	Sept. 9, 1808
Hats, fur, preparing.....	Arnold Buffum.....	Troy, N. Y.....	Sept. 26, 1825
Hats, hardening them on a cone.....	Stephen Hurlbut.....	Glastonbury, Ct.....	June 13, 1831
Hats of leather.—See Class 16.			
Hats, manufacture of.....	John N. Genin.....	New York.....	July 22, 1845
Hats, manufacture of.....	John Maguire.....	Washington, D. C.....	Dec. 7, 1844
Hats, manufacture.....	Ezra Corning, jr.....	Connecticut.....	July 13, 1803
Hats, manufacture.....	William Goodrich.....	Philadelphia, Pa.....	Aug. 20, 1816
Hats, manufacture.....	Henry Lainhart, jr.....	Baltimore, Md.....	June 6, 1809
Hats, manufacture.....	Jedediah Carleton.....	Salem, N. H.....	Jan. 21, 1814
Hats, manufacture.....	Jehiel Bryant and John Bryant.....	Saratoga, N. Y.....	Aug. 26, 1815
Hats, manufacture.....	Silas Mason.....	Norfolk, Mass.....	Feb. 20, 1819
Hats, manufacture.....	George Thatcher.....	Brooklyn, N. Y.....	May 31, 1822

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WEEK ISSUED.
Hats, manufacture.....	Joel Taylor and Chas. Brown.....	Danbury, Conn.....	Jan. 13, 1832
Hats, military.....	Shubael Hoskin.....	Catskill, N. Y.....	April 30, 1810
Hats, military.....	Samuel Tiballs, jr.....	Tyringham, Mass.....	Dec. 26, 1810
Hats, napping.....	James Long.....	Maryland.....	Aug. 5, 1799
Hats, napping.....	Jos. Dart, jr., William Wells & Dan'l Olmstead.....	Buffalo, N. Y.....	May 12, 1832
Hats, napping.....	L. Lyon, 2d.....	Needham, Mass.....	May 16, 1834
Hats, napping.....	L. Lyon, 2d.....	Needham, Mass.....	April 13, 1836
Hats, napping, application of hot water.	Hiram Wortham and Garrard S. Pelly.....	Lancaster, Ky.....	July 9, 1832
Hats, napping.....	Andrew Rankin.....	Newark, N. J.....	Sept. 20, 1839
Hats, napping, with rabbit's fur.....	David Evans.....	Alexandria, D. C.....	Oct. 2, 1820
Hats, palm leaf.....	Frederick Groening.....	Brooklyn, N. Y.....	June 25, 1836
Hats, palm leaf, pressing.....	Chester Gorham.....	Barre, Mass.....	Mar. 3, 1840
Hats, paper.....	Jos. Ford & John White.....	Boston, Mass.....	Nov. 25, 1811
Hats, plank kettle for.....	Schuyler Fisher.....	Herkimer, N. Y.....	July 15, 1816
Hats, plank kettle for.....	Ezra Joyce.....	Brooklyn, N. Y.....	June 6, 1825
Hats, planking.....	Jo. Pitkin and Timothy Kimball.....	Hartford, Conn.....	Oct. 19, 1807
Hats, planking.....	John Gregg.....	Greene co., Pa.....	Mar. 14, 1810
Hats, planking.....	L. L. Macomber.....	Bath, Maine.....	Dec. 31, 1825
Hats, planking.....	Robert Bacon.....	Boston, Mass.....	Jan. 31, 1827
Hats, planking.....	George Page & Edwin Page.....	Manchester, Conn.....	Nov. 9, 1832
Hats, planking and felting.....	Israel Swaim.....	Haverhill, N. H.....	Mar. 7, 1811
Hats, pressing leghorn, &c.....	R. Tyler & B. P. Coston.....	Philadelphia, Pa.....	May 23, 1826
Hats, rounder and gauge.....	Samuel Jones.....	Bridgeport, Pa.....	June 2, 1819
Hats, scalding and napping.....	Daniel Baldwin.....	Ithaca, N. Y.....	Oct. 15, 1829
Hats, scalding and napping.....	Alanson P. Gregory.....	Ithaca, N. Y.....	May 13, 1830
Hats, setting up.....	Joseph Grant.....	Providence, R. I.....	Aug. 11, 1821
Hats, setting or ironing the brims of.....	Francis Degen.....	New York, N. Y.....	Aug. 31, 1842
Hats, sizing and napping.....	George Henning.....	Ithaca, N. Y.....	April 28, 1830
Hats, by steam.....	William Harkins.....	Wheeling, Va.....	Dec. 29, 1826
Hats, by steam.....	David Sutton.....	Lancaster, Ky.....	June 13, 1831
Hats, by steam, and hardening.....	Jonathan Sizer.....	New London, Ct.....	Nov. 6, 1811
Hats, by steam, and hardening.....	Nirum Wildman.....	Danbury, Conn.....	April 2, 1824
Hats, stiffening.....	A. and G. V. Raymond.....	Baltimore, Md.....	Feb. 7, 1818
Hats, stiffening.....	Jonathan D. Wilson.....	New York.....	Aug. 6, 1829
Hats, stiffening, lathe for.....	Henry Raymond.....	Baltimore, Md.....	Nov. 20, 1820
Hats, washing.....	Samuel Drinkhouse.....	Easton Borough, Pa.....	Jan. 30, 1832
Hats, washing and cleaning.....	William Carlock.....	Baltimore, Md.....	Mar. 12, 1830
Hats, water proof.....	Richard Mills.....	Baltimore, Md.....	Feb. 27, 1832
Hats, water proof, elastic.....	A. Buffum & J. Kelly.....	Westfield, R. I.....	Feb. 17, 1820
Hats, water proof, of paper.....	Benjamin Grut.....	New York.....	Oct. 1, 1830
Hats, water proof, stiffening.....	William Buckles.....	Baltimore, Md.....	Nov. 28, 1817
Hats, water proof, stiffening.....	Johan H. Tilge.....	Washington, D. C.....	Sept. 23, 1819
Hats, water proof, stiffening.....	Stephen Hempstead, jr.....	St. Charles co., Mo.....	May 25, 1827
Hats, water proof, stiffening.....	Stephen Hempstead, jr.....	St. Charles co., Mo.....	Oct. 26, 1827
Hats, water proof, stiffening.....	George W. Downs.....	Circleville, Ohio.....	Oct. 25, 1832
Hats, water proof, silk.....	George B. Dexter.....	Boston, Mass.....	Jan. 6, 1836
Hats, weaving grass.....	Lucy Burnap.....	Merrimack, N. H.....	Feb. 16, 1823
Hats, without bowing.....	Roswell Pitkin.....	East Hartford, Ct.....	April 23, 1806
Hatters' fur machine.....	Nicholas Young.....	Pennsylvania.....	May 14, 1802
Hatters' furnace for heating irons.....	G. V. Raymond.....	Richmond, Va.....	Sept. 29, 1826
Hatters' furnace for heating irons.....	Daniel L. Tuthill.....	New York.....	Nov. 8, 1831
Hatters' grates, steam boiler applied.....	H. V. Raymond.....	New York.....	Sept. 16, 1834
Hatters' kettles, constructing.....	William Porter and Abram. Sauger.....	Wakham, Mass.....	July 8, 1834
Hemp, break.....	J. S. Van de Graaff.....	Scott, Ky.....	May 12, 1828
Hemp, break.....	William Mason.....	Washington co., O.....	Dec. 28, 1829
Hemp, breaking.....	William Greathouse.....	Mason co., Ky.....	July 30, 1831

* Reissued Dec. 31, 1845.

INVENTOR OR DISCOVERER.	PATENTEE.	INVENTOR.	DATE OF PATENT.
Hemp, breaking.....	William Stone, jr....	Williamson co., Ten.	Sept. 8, 1831
Hemp, breaking.....	John Pursell.....	Perryville, Ky.....	Mar. 18, 1836
Hemp, breaker.....	P. G. Gardiner.....	New York.....	Feb. 28, 1845
Hemp, break.....	Coleman C. Estes....	Maury co., Tenn....	July 14, 1845
Hemp, break.....	Thos. L. Fortune....	Liberty, Mo.....	Sept. 3, 1846
Hemp, breaking and cleaning....	Geo. T. Tate and W. English.....	Frankfort, Mo.....	July 11, 1849
Hemp, breaker and cleaner.....	Constant B. Butler...	Petersburg, Tenn...	Jan. 6, 1844
Hemp, breaking and cleaning....	Geo. W. Billings and John Harrison.....	Glasgow, Mo.....	June 7, 1845
Hemp, breaking and scotching....	S. H. Sample.....	Fayette, Mo.....	Aug. 18, 1846
Hemp and flax breaking and dressing.....	Benjamin M. Smith..	Massillon, Ohio....	Oct. 7, 1845
Hemp and flax dressing.....	Wm. Y. Singleton....	Springfield, Ill....	May 7, 1845
Hemp and flax break.....	Aaron F. Bruce.....	Marshall P. O., Mo.	June 24, 1844
Hemp, hatching.....	Phineas G. Rice and Gabriel Rice.....	Danville, Ky.....	July 11, 1837
Hemp, &c., heckling and spinning	Wm. Montgomery....	Boston, Mass.....	Feb. 20, 1844
Hemp, &c., machine.....	Richard Deering, sen.	Louisville, Ky.....	June 10, 1845
Hemp and manilla, dressing....	Chandler E. Potter...	Portsmouth, N. H..	Dec. 23, 1834
Hemp, machine*.....	Geo. W. Billings and John Harrison.....	Glasgow, Mo.....	May 1, 1845
Hemp, machine for dressing....	Langdon & Salisbury.	Troy, N. Y.....	April 25, 1846
Hemp, preparation.....	Abraham K. Smedes..	Lexington, Ky.....	Oct. 11, 1846
Hemp, &c., preparing & spinning	Moses Day.....	Roxbury, Mass....	April 30, 1840
Hemp, spinning.....	John McCully.....	Salem, Mass.....	July 14, 1846
Hemp, tarring slivers or bands of machinery for, & making oakum	Wm. Montgomery....	Boston, Mass.....	Aug. 28, 1840
Jacquard frames, improvement in.	John Perrins.....	Philadelphia, Pa..	May 28, 1846
Knitting machine.....	John McMullen and J. Hollen, jr.	Sinking Valley & Logan's Valley, Pa..	Feb. 11, 1837
Knitting stockings.....	A. Porter, J. Mead, & James Stedwell....	Queensbury, N. Y..	July 31, 1815
Knitting stockings.....	John McMullen and J. Hollen, jr.....	Huntington co., Pa.	Mar. 5, 1831
Knitting stockings.....	Arasmus French.....	Springfield, Mass..	Mar. 18, 1849
Knitting stockings.....	Henry Burt.....	Boston, Mass.....	Sept. 23, 1843
Knitting stockings, machine for..	Benj. Hutchinson....	Springfield, Mass..	Oct. 22, 1846
Linens, glazing and polishing....	William Smith.....	New York.....	May 9, 1803
Linens, smoothing.....	Wm. P. Smith and J. Odell.....	Durham, N. H.....	July 17, 1810
Loom.....	Amos Whittemore...	Massachusetts.....	Nov. 17, 1796
Loom.....	David Grieve.....	Massachusetts.....	June 8, 1797
Loom.....	Walter Janes.....	Ashford, Ct.....	Feb. 16, 1810
Loom.....	Walter Janes.....	Ashford, Ct.....	Sept. 1, 1810
Loom.....	Philo. C. Curtis.....	Paris, N. Y.....	Nov. 17, 1810
Loom.....	Nathan'l Miller and P. W. Miller.....	Franklin, Mass....	Aug. 30, 1811
Loom.....	Nathaniel Perry.....	Boston, Mass.....	Sept. 25, 1811
Loom.....	Richard C. Rodgers..	Maine.....	Nov. 29, 1811
Loom.....	Richard Crosbie.....	Newark, N. J.....	Jan. 6, 1812
Loom.....	Job Rood.....	Canterbury, Ct.....	Jan. 23, 1812
Loom.....	Asa Campbell.....	Kingston, Pa.....	Mar. 28, 1812
Loom.....	John Phelps.....	Manlius, N. Y.....	Aug. 27, 1812
Loom.....	C. Cooper & G. Shalk	Lebanon, Pa.....	Aug. 26, 1812
Loom.....	John Heavin.....	Montgomery co., Va.	Oct. 16, 1812
Loom.....	Shepard Briggs.....	Canaan, Ct.....	May 27, 1813
Loom.....	Alfred Ware, jr.....	Franklin, Mass....	June 18, 1813
Loom.....	Thos. R. Williams....	Newport, R. I.....	July 3, 1813
Loom.....	Elisha Robinson.....	Augusta, Mass....	July 24, 1813
Loom.....	Robert Sugden.....	Boston, Mass.....	Dec. 2, 1813
Loom.....	John M. Guiramonnd..	Baltimore, Md.....	Jan. 7, 1814
Loom.....	John Heavin.....	Montgomery co., Va.	Feb. 18, 1814
Loom.....	Daniel Briggs.....	Canaan, Ct.....	Feb. 19, 1814

* Antedated Nov. 1, 1844.

† Reissued March 12, 1844.

INVENTORS OR DISCOVERERS.	PATENTERS.	PLACES.	DATE.
Loom.....	J. Conker and S. Gano	Berkeley co., Va....	April 23, 1814
Loom.....	Jac. Spinkie.....	Wythe c. h., Va....	April 27, 1814
Loom.....	Thomas Siddall.....	Bristol, Pa.....	July 9, 1814
Loom.....	William Wright.....	Brooklyn, N. H....	Oct. 12, 1814
Loom.....	Seth Craig.....	Philadelphia, Pa....	Oct. 18, 1814
Loom.....	Salmon Bronson.....	Kent, Ct.....	Nov. 25, 1814
Loom.....	F. C. Lovel and P. T. Jackson.....	Boston, Mass.....	Feb. 23, 1815
Loom.....	Joseph Jelleffs.....	Eutawville, N. Y....	May 24, 1815
Loom.....	C. Cooper & G. Shalk	Lebanon, Pa.....	May 31, 1815
Loom.....	Ira Draper.....	Weston, Mass.....	Jan. 7, 1816
Loom.....	Robert Jackson.....	Attleboro', Pa.....	July 23, 1816
Loom.....	Samuel Chapman.....	Otsego, N. Y.....	Aug. 30, 1816
Loom.....	Benjamin Cummings.	Townsend, Mass....	Oct. 3, 1817
Loom.....	Stephen Armstrong...	Poughkeepsie, N. Y.	April 7, 1818
Loom.....	David Grieve.....	Providence, R. I....	April 11, 1818
Loom.....	Edmund Warren.....	New York.....	Aug. 27, 1818
Loom.....	Lot Forrester.....	Ridgefield, Ct.....	May 15, 1819
Loom.....	J. H. Pierson & J. H. Simmons.....	Hampstead, N. Y..	Dec. 31, 1819
Loom.....	Edmund Warren.....	New York.....	Dec. 11, 1821
Loom.....	Edmund Warren.....	New York.....	May 1, 1822
Loom.....	C. Whiting, J. Goulding & W. James.....	Dedham, Mass.....	June 25, 1824
Loom.....	Roswell Wilcox.....	Columbus, Ohio.....	Mar. 21, 1825
Loom.....	Joseph Scholfield.....	Stonington, Ct.....	Sept. 9, 1825
Loom.....	Roswell Wilcox.....	Franklin co., Ohio..	April 21, 1826
Loom.....	Cornelius Bergen.....	New York.....	June 14, 1826
Loom.....	Samuel Chidester.....	Windham, N. Y....	Sept. 2, 1826
Loom.....	Oliver C. Burr.....	Milbury, Mass.....	July 17, 1825
Loom*.....	Christian W. Shonherr	Subject of the King of Saxony.....	May 8, 1827
Loom|.....	Enoch Burt.....	Manchester, Ct.....	Aug. 8, 1837
Loom, beam for.....	Simeon Pettee.....	Foxborough, Mass..	June 15, 1813
Loom|.....	E. B. Bigelow.....	Boston, Mass.....	Aug. 18, 1846
Loom, beam for.....	Goliath Williams.....	N. Providence, R. I.	Aug. 24, 1813
Loom, brushes for dressing warps	Samuel Taylor.....	Lowell, Mass.....	May 26, 1842
Loom, cam, improvement in.....	Richard Garsed.....	Frankford, Pa.....	July 20, 1846
Loom, carpet.....	Horace Baker.....	North Salem, N. Y.	April 14, 1826
Loom, carpet.....	Josiah R. Clark.....	S. Coventry, Ct....	May 7, 1830
Loom, carpet.....	John Haight.....	Harsimus, N. J....	May 17, 1834
Loom, carpet and rug.....	William Bacon.....	Philadelphia, Pa....	April 7, 1830
Loom, cassinet.....	James Hammond and John McClelland...	Williamsport, Pa....	July 3, 1830
Loom, crank.....	Ephraim Cutter.....	Walpole, N. H.....	Sept. 27, 1811
Loom, damask.....	Tompkins & Gilroy...	N. Providence, R. I.	May 9, 1835
Loom, domestic.....	Benjamin Maltby.....	New York.....	April 13, 1822
Loom, domestic.....	Jer. Hubbard.....	Jamestown, N. C....	Nov. 6, 1826
Loom, domestic and factory.....	Walter Jenes.....	Ashford, Ct.....	Mar. 20, 1813
Loom, family.....	Charles Hathaway...	Walton, N. Y.....	Oct. 11, 1814
Loom, figure cloth.....	William Levalley.....	Canterbury, Ct....	Mar. 20, 1819
Loom, fish nets.....	J. Carr, J. Shannon, and Wm. Carr.....	Sunbury, Pa.....	Sept. 14, 1844
Loom, hand and power.....	John Thorp.....	Providence, R. I....	Mar. 28, 1812
Loom, hand, for weaving fabrics||	Wm. Townshend.....	Rochester, N. H....	April 10, 1845
Loom, hand, for weaving fringe..	Eliza Ann B. Judkins.	Portland, Me.....	Feb. 2, 1839
Loom, harness for§.....	John Blackmar.....	Killingly, Ct.....	Aug. 7, 1834
Loom, harness for.....	John Blackmar.....	Killingly, Ct.....	Oct. 20, 1836
Loom, heddle, metallic.....	Charles Strong.....	Hartford, Vt.....	April 24, 1840
Loom, heddle stuff, making weavers' eye harness.	John Thorpe & Wm. G. Angell.....	Providence, R. I....	Feb. 26, 1840
Looms, improvement in.....	W. Datcher.....	Bennington, Vt....	June 27, 1846
Loom, (improvement on Rogers')	Richard C. Rodgers...	Maine.....	June 23, 1819
Loom, ingrain carpet.....	William Sherwood...	Somersworth, N. H.	Jan. 26, 1820

* Antedated March 21, 1837.

|| Antedated April 24, 1845.

† Antedated Feb. 10, 1837.

‡ Antedated Oct. 20, 1836.

§ Antedated Feb. 13, 1844.

¶ Antedated Jan. 21, 1840.

INVENTION OR DISCOVERY.	PATENTEE.	INVENTED.	DATE GRANTED.
Loom, knitting.....	Richard Walker and Jefferson McIntire.....	Portsmouth, N. H.	Feb. 12, 1844
Loom, knitting*.....	Pierre E. Ladrangé.....	Vignory, kingdom of France.....	Oct. 16, 1844
Loom, knit.....	Francis Hall.....	Charlestown, Mass.....	Nov. 28, 1817
Loom, making and using.....	John Goulding.....	Dedham, Mass.....	July 7, 1830
Loom, metallic, heddle for.....	W. Janes & D. Bolles.....	Ashford, Ct.....	April 26, 1815
Looms, mode of delivering warp in.....	John Coulter.....	Zenia, Ohio.....	April 25, 1843
Looms, operating shuttles of.....	R. P. Cunningham.....	Abington, Ct.....	Dec. 16, 1845
Loom, picker, tube.....	Benjamin Holbrook.....	Providence.....	Feb. 21, 1836
Loom, power.....	William Gilmour.....	Smithfield, R. I.....	Oct. 28, 1830
Loom, power.....	Wm. B. Leonard.....	Fishkill, N. Y.....	May 23, 1837
Loom, power.....	Amasa Stone.....	Providence, R. I.....	April 30, 1839
Loom, power.....	James C. Kempton.....	Manayunk, Pa.....	June 14, 1834
Loom, power.....	Aden Holbrook & B. F. French.....	Dunstable, N. H.....	June 17, 1834
Loom, power.....	David Whitman.....	Windham, Ct.....	Mar. 20, 1835
Loom, power.....	William G. Gavit.....	Washington co., R. I.....	April 8, 1835
Loom, power.....	F. C. Lewis.....	Grafton, Mass.....	Mar. 30, 1836
Loom, power.....	Benjamin Lapham.....	Waterford, N. Y.....	June 26, 1836
Loom, power.....	Elijah Fairman.....	Stafford, Ct.....	Feb. 6, 1838
Loom, power.....	Wm. B. Pender & N. C. Horn.....	Wolfeborough, N. H.....	Aug. 15, 1838
Loom, power.....	Caleb Duxbury and J. Nield.....	Taunton, Mass.....	April 21, 1849
Loom, power.....	James Nield.....	Taunton, Mass.....	May 25, 1844
Loom, power.....	James Nield.....	Taunton, Mass.....	Mar. 15, 1845
Loom, power.....	James Nield.....	Taunton, Mass.....	Mar. 15, 1845
Loom, power.....	Daniel Barnum.....	Bridgeport, Ct.....	Mar. 26, 1845
Loom, power.....	George B. Sanford.....	Putney, Vt.....	Mar. 17, 1843
Loom, power, broad.....	John Leland.....	Milbury, Mass.....	Mar. 9, 1833
Loom, power, check and plaid.....	E. Burt, O. D. Boyd, and A. H. Boyd.....	Manchester, Ct.....	Aug. 19, 1828
Loom, power and common.....	Benjamin Lapham.....	Saratoga, N. Y.....	Jan. 20, 1838
Loom, power, figure.....	James M. Hoggan.....	New Haven, Ct.....	Oct. 14, 1834
Loom, power, figure.....	William Crompton.....	Taunton, Mass.....	Nov. 25, 1837
Loom, power, friction to yarn beam.....	Stephen Kimball.....	Putney, Vt.....	May 30, 1839
Loom, power, lathe for.....	John Whitehead.....	N. Providence, R. I.....	Aug. 30, 1819
Loom, power, lay for.....	Benjamin Brooks.....	New Market, N. H.....	Dec. 17, 1834
Loom, power, for silks.....	Gamaliel Gay.....	Poughkeepsie, N. Y.....	Sept. 26, 1835
Loom, power, and stopping.....	Jesse Taylor & Joseph Woodhead, &c.....	Middletown, Pa.....	April 21, 1831
Loom, power, and taking up cloth.....	Wm. B. Leonard.....	Fishkill, N. Y.....	May 23, 1827
Loom, power, & taking up motion.....	Amasa Stone.....	Johnston, R. I.....	Aug. 17, 1835
Loom, power, & taking up motion.....	H. Hendrick.....	Killingly, Ct.....	Sept. 22, 1836
Loom, power, & taking up motion.....	John P. Comins.....	Killingly, Ct.....	Oct. 20, 1836
Loom, power, treadle in.....	Eli Horton.....	Stafford, Ct.....	Feb. 22, 1833
Loom, power, upright.....	C. Shepard & J. Thorpe.....	Taunton, Mass.....	July 25, 1816
Loom, power, weav'g stock frames.....	F. Goodell and F. H. Harvey.....	Ramapo, N. Y.....	Dec. 2, 1835
Loom, power, wire.....	John S. Gustin.....	New York.....	Feb. 23, 1838
Loom, power, mode of throwing shuttles.....	R. P. Cunningham.....	Pomfret, Ct.....	April 25, 1843
Loom, power, weaving plain cloth.....	Frederick Downing.....	Enfield, Mass.....	Jan. 27, 1843
Loom, power, for weaving plaid.....	Erastus B. Bigelow.....	Boston, Mass.....	April 10, 1845
Loom, power, rotary temples for.....	George Draper.....	Saugus, Mass.....	Feb. 24, 1842
Loom, power, stopping when weft and filling fails.....	O. M. Stillman.....	Stonington, Ct.....	Nov. 10, 1841
Loom, power, weaving carpets.....	Thomas Flint.....	Boston, Mass.....	June 27, 1841
Loom, power, weaving counter-panes||.....	Erastus B. Bigelow.....	Lancaster, Mass.....	July 28, 1849
Loom, power, weaving counter-panes||.....	Erastus B. Bigelow.....	Lancaster, Mass.....	Aug. 2, 1848

*Patented in France, June 1, '43. †Antedated Oct. 31, '42. ‡Reinforced Mar. 14, '46. §Antedated May 1, '43.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WARRANT DATED.
Loom, power, weaving figured counterpanes.....	Erastus B. Bigelow...	Lancaster, Mass....	April 24, 1840
Loom, reeds, machine for making	Jephth A. Wilkinson.	Otsego, N. Y.....	July 3, 1816
Loom, reeds.....	Jacob Sennett.....	Philadelphia, Pa....	Oct. 1, 1830
Loom, reeds.....	Horace Holt.....	Rutland township, O.	Oct. 17, 1831
Loom, reeds, heddles or harness*	Jephth A. Wilkinson.	Providence, R. I....	July 17, 1835
Loom, reeds, metallic.....	Peter F. Herben.....	Patterson, N. J....	Nov. 15, 1821
Loom, reeds, polishing wire or br	ass for — See Polishing,	Class 2.	
Loom, regulating yarn beam.....	Welcome A. Potter...	Cranston, R. I.....	Nov. 23, 1837
Loom, regulating the delivery of the warp from the warp beam..	William H. Brayton..	Warren, R. I.....	Jan. 6, 1844
Loom, rotary temples for.....	Isaac C. Lane.....	Waltham, Mass....	Mar. 26, 1844
Loom, sail cloth.....	James Davenport....	New Jersey.....	Feb. 14, 1794
Loom, sail cloth.....	James Richards.....	Patterson, N. J....	Aug. 10, 1821
Loom, sail duck.....	Joseph Chapman....	Frankfort, Pa....	July 9, 1821
Loom, sattinette.....	John D. Seagrave....	Uxbridge, Mass....	May 17, 1838
Loom, sattinette, power.....	Richard Mitchell and N. Butterworth.....	Troy, Mass.....	Mar. 22, 1828
Loom, securing the bobbin in shuttles for weaving.....	Daniel Leavitt.....	Cabotville, Mass....	Aug. 18, 1842
Loom shuttles, mode of throwing	John Goulding.....	Dedham, Mass....	Aug. 24, 1827
Loom, shuttle, tongue.....	Comfort B. Thorpe....	Smithfield, R. I....	April 17, 1837
Loom, shuttle, spindle spring....	Samuel Cranston....	Cumberland, R. I....	Mar. 20, 1822
Loom, shuttle, tying knots.....	John Thorpe.....	Providence, R. I....	Nov. 20, 1828
Loom, shuttles for weaving cloth.	James Baldwin.....	Nashua, N. H....	Jan. 31, 1840
Loom, silk, weaving narrow goods	Cornelius Bergen....	Brooklyn, N. Y....	Dec. 18, 1839
Loom for silk ribbons.....	C. Ganahl, assignor to F. Ganahl.	Innsbruck, Austria..	Oct. 3, 1846; for. pat. dated May 19, 1837
Looms, stop apparatus for.....	Enoch Burt.....	Manchester, Ct....	June 20, 1845
Loom, stocking.....	Eb. Herrick.....	Stockbridge, Mass....	Oct. 22, 1813
Loom, stocking.....	John Bazin, jr.....	Canton, Mass....	Oct. 28, 1814
Loom, stocking.....	Aaron Porter.....	Queensbury, N. Y....	Aug. 22, 1816
Loom, stocking, rotary power...	Richard Walker.....	Portsmouth, N. H....	Dec. 5, 1839
Loom, temples for.....	J. Beard & A. Whitney	Waltham, Mass....	April 6, 1842
Loom, temples.....	Erastus B. Bigelow...	Boston, Mass....	Feb. 24, 1845
Loom temples.....	Benjamin Rogers....	Beaver creek, Ohio..	Nov. 24, 1814
Loom temples.....	John Bazin, jr.....	Canton, Mass....	Aug. 8, 1823
Loom temples.....	Philo C. Curtis.....	Paris, N. Y.....	June 16, 1825
Loom temples.....	Orsemus S. Stillman..	Brookfield, N. Y....	Jan. 30, 1826
Loom temples.....	John Standish.....	Providence, R. I....	Nov. 11, 1830
Loom temples.....	Peter Newell.....	Waterford, N. Y....	Jan. 5, 1833
Loom temples.....	C. T. K. Rawlings....	Lowell, Mass....	Aug. 30, 1833
Loom temples.....	Emory A. Angell....	Killingly, Conn....	Oct. 19, 1838
Loom, temples, opening and closing the jaw.	Erastus Williams and Dan. L. Huntington.	Norwich, Conn....	Nov. 16, 1841
Loom temples, perpetual.....	Daniel A. Smith.....	Townshend, Mass....	Feb. 23, 1816
Loom temple, revolving bar.....	E. B. Harris and A. R. Arnold.....	Woodstock, Conn....	April 13, 1830
Loom, temples, rotary.....	George Draper.....	Palmer, Mass....	Oct. 28, 1840
Loom temple, rotary.....	Ira Draper.....	Segus, Mass.....	April 1, 1829
Loom, temples, self-acting†.....	Jonathan Dennis, jr., assignee of Kendall Gibbs.....	Portsmouth, R. I....	Feb. 13, 1839
Loom temple, self-acting.....	Arnold Palmur.....	New Lebanon, N. Y..	Feb. 10, 1846
Loom, temples, self-acting rotary.	William Craig and John Cochrane.....	England.....	Nov. 25, 1841
Loom temple, self-adjusting.....	Samuel P. Mason....	Newport, R. I.....	July 22, 1837
Loom temple, self-operating.....	Ephraim R. Otis....	River Head, Conn..	April 2, 1830
Loom temple, sliding.....	John Waterman.....	Providence, R. I....	May 28, 1818
Loom temple, spring.....	A. Jenk and J. Clewel	Holmesburg, Pa....	Mar. 19, 1827
Loom treadles and harness.....	B. Hartford and W. B. Tilton.....	Enfield, N. H....	Dec. 29, 1837
Loom, vibrating, cam.....	William H. Howard...	Worcester, Mass....	Feb. 12, 1830

*Renewed May 24, 1836, lost by fire Dec. 16, 1836; renewed Aug. 29, 1840, and again renewed April 29, 1843.

†Antodated November 6, 1838.

‡Renewed December 2, 1836.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN MADE.
Loom warp suspender.....	William Squire.....	New York.....	Jan. 17, 1816
Loom warping.....	Calvin Whitney.....	Dedham, Mass.....	Feb. 1, 1814
Loom warping.....	Thomas Siddall.....	Germantown, Pa....	Mar. 27, 1815
Loom warping.....	James Morgan.....	Baltimore, Md.....	April 5, 1831
Loom warps, regulating tension..	Erastus B. Bigelow..	Boston, Mass.....	Mar. 12, 1843
Loom, water.....	Thomas Mussey.....	Philadelphia, Pa....	Mar. 4, 1811
Loom, water.....	Cyrus Shepard.....	Philadelphia, Pa....	April 27, 1812
Loom, water.....	Brightberry Brown..	Albemarle, Va.....	Mar. 21, 1814
Loom, water.....	Philo C. Curtis.....	Paris, N. Y.....	May 28, 1816
Loom, water.....	Thomas Mussey.....	New London, Conn..	June 10, 1817
Loom, water, steam.....	S. Blydenburg and Hezekiah Healey.....	Worcester, Conn...	Feb. 20, 1815
Loom weaving.....	Phoenix Manufacturing Company, assignees of Benjamin Slingerland.....	Patterson, N. J.....	April 1, 1845
Loom, weaving, figured goods...	Horace Baker.....	North Salem, N. Y.	Aug. 30, 1827
Loom, weaving, figured goods...	John Smith.....	Shaefferstown, Pa...	April 22, 1835
Loom, weaving, girth cloth.....	Robert Lloyd.....	Philadelphia, Pa....	Feb. 8, 1810
Loom, weaving, harness.....	M. Chandler and E. Brown.....	Cazenovia, N. Y....	Jan. 26, 1821
Loom, weaving, improvement in..	John Standish.....	Providence, R. I....	Nov. 11, 1830
Loom, weaving, knotted counterpanes.....	Erastus B. Bigelow..	W. Boylston, Mass..	Jan. 6, 1838
Loom, weaving, stocks.....	Conrad Kile.....	Erie, Pa.....	Sept. 18, 1835
Loom, weaving, webbing, tape...	Asa G. Bill and George Spalding.....	Middletown, Conn..	Mar. 28, 1831
Loom, weaver's harness, metal eyes for.	J. Conger and L. Woodbury.....	Locke, N. Y.....	Nov. 15, 1825
Loom, weaver's harness for....	J. Thorp and W. G. Angell.....	Providence, R. I....	Dec. 31, 1838
Loom, weaving.....	Charles Cooper.....	Lebanon, Pa.....	Nov. 4, 1808
Loom, weaving.....	Cullen Whipple.....	Douglass, Mass....	June 11, 1836
Loom, weaving, chips.....	Philip Bennet.....	Rochester, N. Y....	Feb. 8, 1806
Loom, weaving, cloth for stocks..	Conrad Kile.....	Philadelphia, Pa....	Oct. 11, 1836
Loom, weaving, coverlets*	E. Meily, jr., J. Millinger, and S. Millinger	Lebanon, Pa.....	Mar. 1, 1834
Loom, weaving, feathered cloth..	Jon. and Rozanna Sizer	New London, Conn..	Oct. 21, 1812
Loom, weaving, figured cloth....	George Detterich and J. Conger.....	Tompkins co. N. Y.	Mar. 12, 1831
Loom, weaving.....	David Farrior and D. P. J. Murphy.....	Aberfoil, Alabama..	Dec. 4, 1843
Loom, weaving figured fabrics...	Clinton Gilroy.....	New York, N. Y....	April 15, 1843
Loom, weavers', for working any number of heddles.....	Gavin McCrae.....	Baltimore, Md.....	Oct. 18, 1843
Loom, weaving counterpanes, &c., manner of mounting the.....	Erastus B. Bigelow..	Lancaster, Mass....	May 30, 1842
Loom, weaving figured and other fabrics.†	Jeremiah Wilbur, assignee of Clinton G. Gilroy, of G. Britain	New York, N. Y....	Mar. 12, 1842
Loom, weaving fish nets.....	Levi Van Hoesen....	New Haven, Conn..	Oct. 7, 1842
Loom, weavers' harness, wire heddles for.....	Abraham Howe and Sidney S. Grannis..	Morrisville, N. Y....	Sept. 30, 1841
Loom, weavers' harness, wire heddles for.‡	Abraham Howe and Sidney S. Grannis..	Morrisville, N. Y....	Oct. 11, 1841
Loom, weaving figured cloths, Jacquard machinery for.....	Alexander Calderhead,	Philadelphia, Pa....	Feb. 3, 1841
Loom, weaving figured damask hair-seating.....	Samuel Ross.....	Camden, N. J.....	Sept. 18, 1841
Loom, weavers' shuttles.....	Roswell Douglass, assignee of J. Coburn.	Lowell, Mass.....	Mar. 12, 1842
Loom, weaving.....	Benjamin W. and Horace Hendrick.	Woonsocket Falls, R. I.....	May 12, 1842

* Reissued June 26, '35. † Antedated May 1, '42. ‡ Date of Eng. pat. Nov. 12, '39. § Reissued May 30, '42.

MANUFACTURES.

INVENTIONS OR DISCOVERIES.	PATENTERS.	PLACES.	DATES.
Loom, weaving bolting cloth, mounting and using the harness	Rollin White.....	Williamstown, Vt....	April 1, 1845
Loom, weaving carpets	Erastus B. Bigelow...	Lancaster, Mass.....	May 16, 1845
Loom, weaving carpets	Erastus B. Bigelow...	Lancaster, Mass.....	May 26, 1845
Loom, wire, harness	Elisha Otis.....	Cazenovia, N. Y.....	Dec. 31, 1844
Loom, wire, harness	Ezra Brown.....	Cazenovia, N. Y.....	April 12, 1845
Loom, wire, harness	Ezra Brown.....	Cazenovia, N. Y.....	Oct. 30, 1845
Mats, of manilla grass	Samuel S. Williams...	Roxbury, Mass.....	Aug. 22, 1845
Mule, self-acting	William Mason.....	Taunton, Mass.....	Oct. 3, 1845
Nankeen, making, yellow & buff	Joseph B. Nones.....	Philadelphia, Pa.....	April 26, 1845
Napping cloth	Samuel Mulliken.....	Philadelphia, Pa.....	Mar. 11, 1791
Napping cloth	William Burt.....	June 23, 1797	
Napping cloth	James Olney.....	Hartford, Ct.....	Mar. 1, 1813
Napping cloth	John Mathes.....	Barre, Va.....	May 27, 1813
Napping cloth	Isaac Sanford.....	Providence, R. I.....	Mar. 26, 1814
Napping cloth	Daniel Merwin & Horace Kellogg.....	Hudson, N. Y.....	Oct. 26, 1844
Napping cloth	T. S. Barnum & E. Smith	Litchfield, Conn.....	April 4, 1845
Napping cloth	William Duncan and J. Davidson.....	Ackworth, N. H.....	May 29, 1815
Napping cloth	E. Starr and Nathan Couch.....	Sullivan town p N. Y.	Mar. 30, 1817
Napping cloth	Bishop N. Parsons.....	New York.....	April 16, 1847
Napping cloth	Levi & Jedediah Prescott.....	Pittsburgh, Pa.....	Nov. 5, 1845
Napping cloth	Job Wilkerson.....	New York.....	May 12, 1825
Napping cloth	Stephen Marsh.....	Fairfax, Vt.....	July 20, 1825
Napping cloth	M. R. Norris and L. Phillips.....	Covington, N. Y.....	Mar. 21, 1839
Napping cloth	Zachariah Allen.....	Providence, R. I.....	Aug. 10, 1835
Napping cloth	Zachariah Allen.....	Providence, R. I.....	Feb. 2, 1830
Napping cloth	Joseph Groff.....	Rapho, Pa.....	Feb. 10, 1830
Napping cloth	Thomas Hurd & Jesse Fox.....	Lowell, Mass.....	June 23, 1830
Napping cloth	John Jewett.....	Dudley, Mass.....	Dec. 30, 1830
Napping cloth	Eliakim Benham.....	Roxbury, Mass.....	Jan. 22, 1832
Napping cloth	Reuben Daniels.....	Woodstock, Vt.....	June 26, 1835
Napping cloth	Stephen Marsh.....	Jericho, Vt.....	Jan. 11, 1835
Napping cloth	Benjamin Swazey.....	Mount Vernon, Vt.....	Aug. 8, 1837
Napping cloth, and brushing	John Bryan and S. D. Fuller.....	Mendham co., N. J.....	April 4, 1830
Napping cloth, and carding	Jos. A. Christie.....	Elizabethtown, N. J.....	Jan. 24, 1816
Napping cloth machine, called cross napping machine.	John Taylor and John Smith.....	New Lebanon, N. Y.....	May 4, 1844
Napping cloth, shearing and brushing	John J. Bryant.....	Andover, N. H.....	Sept. 2, 1818
Napping cloth, and steaming	S. R. Parkhurst.....	Providence, R. I.....	June 24, 1834
Napping cloth, teasing & brushing	John Taylor.....	Waltham, Mass.....	Oct. 28, 1815
Napping cloth, vibrating	Samuel Duncan.....	Northampton, N. Y.....	Jan. 21, 1836
Napper, metallic	John M. Pratt.....	Dudley, Mass.....	Oct. 3, 1836
Napper, teasing cloth	James Olney.....	Westmoreland, N. Y.....	Mar. 29, 1837
Napper, teasing cloth	Josiah Beckwith.....	Lyme, Conn.....	May 16, 1817
Napper, teasing cloth	Aaron Foster.....	Poultney, Vt.....	Nov. 25, 1818
Napper, teasing cloth	Aaron Foster.....	Whitestown, N. Y.....	Aug. 24, 1821
Net or seine making machine	John McCullen.....	Baltimore, Md.....	June 27, 1845
Oakum, machinery for manufacture of.	Thaddeus, Henry and Daniel Tibbals.....	Chatham, Vt.....	July 8, 1843
Oakum, making	James Tibbals.....	Haddam, Ct.....	Feb. 8, 1839
Oakum, picking	Daniel French.....	Middletown, Conn.....	Oct. 9, 1835
Oakum, picking	Michael Morrison.....	New Bedford, Mass.....	Feb. 14, 1806
Oakum, picking	Daniel Rider.....	New York.....	April 26, 1808
Oakum, picking	E. Waterhouse.....	Gardner, Maine.....	April 24, 1821
Oakum, picking	Ebenezer Cook.....	Haddam, Conn.....	July 9, 1832

* Antedated May 1, 1842.

† Antedated May 2, 1842.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Oakum, picking.....	Ebenezer Cook & Sel-	Haddam, Conn.....	June 7, 1834
Oakum, picking.....	den Usher.....	Boston, Mass.....	Oct. 5, 1838
Oakum, picking.....	Hiram Burnham.....	Tewksbury, Mass..	July 16, 1842
Oakum picking, combination of machinery for.....	Otis Allen.....		
Oakum and hair, picking.....	Jno. Stanbury & Wm. Ridgway, jr.....	Baltimore, Md.....	Jan. 17, 1842
Oil cloth, drying.....	R. B. Lewis.....	Hallowell, Maine...	June 25, 1836
Oil cloth, manufacture.....	Daniel Sampson.....	Winthrop, Maine...	May 30, 1837
Oil cloth, manufacture.....	Isaac Maccauley.....	Philadelphia, Pa....	April 4, 1825
Oil silk, manufacture.....	Deborah Powers, adm'tx of Wm. Powers	Lansingburg, N. Y.	Feb. 18, 1832
Painting cloth.....	Ralph Hodgson.....	New York.....	Feb. 1, 1793
Paper, &c., applying paste or sizing to sheets of, &c., in the process of making cards, &c.....	Otis Ferrin.....	Lansingburg, N. Y.	Nov. 28, 1831
Paper, books, &c., machine for cutting.....	David H. Gibert.....	Dorchester, N. Y...	April 11, 1842
Paper, brown, from beach grass.....	Joseph Woodhouse...	Otsego, N. Y.....	May 30, 1835
Paper, cane hemp, making.....	Isaac Sanderson.....	Milton, Mass.....	Feb. 22, 1838
Paper, carbonated, for multiplying writings.....	B. C. Smith.....	Burlington, N. J....	Nov. 21, 1843
Paper, cloth, &c., staining and printing.....	Joseph Hartshorne...	Philadelphia, Pa....	April 20, 1810
Paper, cutting machine.....	Benjamin Mestayer...	New York.....	June 28, 1815
Paper, cutting machine.....	John McClintic & Geo. Faber.....	Chambersburg, Pa...	Dec. 18, 1825
Paper, cutting machine.....	Francis B. Howell.....	Lockport, Ohio.....	May 21, 1830
Paper, cutting machine.....	John Shugert.....	Quincy, Pa.....	Dec. 14, 1830
Paper, cutting & trimming books *	Edward Pine.....	Troy, N. Y.....	July 20, 1831
Paper, cutting and trimming the edges.....	Frederick J. Austin...	New York.....	June 16, 1841
Paper, cutting and trimming in the ream.....	Jonas Bateman.....	Harvard, Mass.....	Mar. 12, 1834
Paper, cutting in sheets.....	John Ames.....	Springfield, Mass...	Feb. 28, 1834
Paper, cylinders for drying.....	John Ames.....	Springfield, Mass...	Feb. 28, 1834
Paper, cylindrical machine.....	H. P. Howe.....	Shirley, Mass.....	Sep. 20, 1836
Paper, drying.....	Isaac Sanderson.....	Milton, Mass.....	April 18, 1829
Paper, engine.....	Henry Howe.....	Shirley, Mass.....	Mar. 12, 1836
Paper, engine regulator.....	William Dickinson...	Worcester, Mass...	Sept. 3, 1840
Paper, engines, washers for.....	John M. Hollingsworth	Braintree, Mass....	Dec. 31, 1838
Paper, finishing.....	Clarke Rice.....	Watertown, N. Y...	April 26, 1834
Paper, finishing machine.....	Irah White & L. Gale.	Newberg, Vt.....	Feb. 28, 1827
Paper, hangings, printing.....	Thomas Gilpin.....	Philadelphia, Pa....	June 25, 1830
Paper, hangings, with satin grounds	Peter Force.....	Washington, D. C...	Aug. 22, 1822
Paper, hot pressing.....	Hez. Steele.....	Hudson, N. Y.....	Sep. 8, 1813
Paper, leather.....	Francis Bailey.....	Salisbury, Pa.....	July 31, 1809
Paper, on machines, manufacture	Ephraim F. Blank and Thomas Blank.....	New York.....	Feb. 16, 1830
Paper, machine.....	Richard Waterman & Geo. W. Annis.....	Providence, R. I....	Aug. 30, 1828
Paper, mach'g for prepar'g top, &c.	John Ames.....	Springfield, Mass...	Feb. 20, 1835
Paper, machine for separating sand, &c., from pulp, in the manufacture of.....	Abm. Frost.....		Mar. 19, 1804
Paper, making.....	Wm. Bishop.....	Coventry, Conn.....	Dec. 31, 1845
Paper, making.....	John Biddis.....	Pennsylvania.....	Mar. 31, 1794
Paper, making.....	Cyrus Austin.....	New Jersey.....	Dec. 14, 1798
Paper, making.....	Robert R. Livingston	New York.....	Oct. 28, 1799
Paper, making.....	Thomas Langstroth...	Bucks county, Pa...	May 1, 1804
Paper, making.....	Charles Kinsey.....	Essex, N. J.....	May 8, 1807
Paper, making.....	Thomas Gilpin.....	Philadelphia, Pa....	Dec. 24, 1816
Paper, making.....	John B. Pignatelle...	New York.....	Dec. 2, 1819
Paper, making.....	John Ames.....	Springfield, Mass...	May 14, 1822
Paper, making.....	Isaac Barbenk.....	Worcester, Mass...	Sep. 8, 1824

* Antedated Dec. 16, 1840.

† Reissued Oct. 26, 1892.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	DATE GRANTED.
Paper, making.....	Gardiner Burbank....	Worcester, Mass....	April 12, 1826
Paper, making.....	Andrew Sprague and Nich. A. Sprague....	Fredonia, N. Y....	Oct. 31, 1828
Paper, making.....	Joseph Truman.....	Bridgeport, Pa....	Feb. 28, 1834
Paper, making.....	Charles Forbes.....	East Hartford, Ct....	Feb. 20, 1836
Paper, making*.....	Wm. & Abij. L. Knight & Edward F. Condit	Whippany, N. J....	Sept. 25, 1839
Paper, making.....	John M. and Lyman Hollingsworth.....	Boston, Mass.....	Dec. 4, 1843
Paper, making, agitator.....	Reuben Fairchild....	Trumbull, Conn....	May 4, 1829
Paper, making from corn husks..	Burgess Allison & Jno. Hawkins.....	New Jersey.....	Dec. 30, 1802
Paper, making card.....	Edward L. Perkins....	Boston, Mass.....	July 10, 1840
Paper making, ruling and cutting at one operation.....	John Ames.....	Springfield, Mass....	July 31, 1840
Paper, making, from carriers' shav- ings.....	Joseph Condit, jr....	New Jersey.....	Dec. 26, 1801
Paper, making, filtering for.....	Thomas Trench.....	Ithaca, N. Y.....	May 26, 1832
Paper, making, by the flat press..	Marsden Haddock....	New York.....	July 17, 1836
Paper, making, from pelts.....	John McThorndike....	.....	Mar. 7, 1814
Paper, making, from rags, whiten- ing straw.....	John W. Cooper.....	Wash'g'n town'p Pa.	Feb. 7, 1829
Paper, making, from sea grass....	Elisha H. Collier.....	Plymouth, Mass....	April 15, 1828
Paper, making, from sea weed....	Samuel Green.....	New London, Conn.	Feb. 15, 1809
Paper, making, from straw, &c.†	William Magaw.....	Meadville, Pa.....	Mar. 8, 1828
Paper, making, top press roller for	Mason Hunting.....	Waterbury, Mass....	Oct. 20, 1828
Paper, manufacturing.....	Solomon Simpson.....	Newbury, Vt.....	Mar. 12, 1832
Paper, manufacturing.....	Arthur Varnham.....	London, England....	Aug. 9, 1845
Paper, manufacturing, for covered buildings.....	Frederick A. Taft....	Dedham, Mass....	May 11, 1839
Paper, manufacturing, from wood	Lewis Wooster and J. B. Holmes.....	Meadville, Pa.....	Aug. 3, 1830
Paper, mark of opacity in.....	John Reich and Edw. Star.....	Philadelphia, Pa....	May 11, 1816
Paper, moulds.....	John Carnes.....	Delaware.....	April 11, 1793
Paper, moulds.....	Phares Barnard.....	Whitestown, N. Y.	July 7, 1809
Paper, polishing.....	George Bird.....	Walpole, Mass....	April 11, 1825
Paper, polishing machine.....	William Coolidge....	Boston, Mass.....	April 18, 1808
Paper, preparing husks to make..	Homer Holland.....	Westfield, Mass....	Aug. 13, 1836
Paper, press, cylinder, hot & cold.	Asahel H. Jervis and Thomas Trench....	Ithaca, N. Y.....	Nov. 6, 1832
Paper, sand, glass, or emery.....	Edmund Morris.....	Philadelphia, Pa....	Sept. 14, 1844
Paper, sizing.....	John Ames.....	Springfield, Mass....	Sept. 1, 1832
Paper, sizing.....	Edmund Blake.....	Alstead, N. H.....	Nov. 19, 1833
Paper, sizing.....	W. W. Wilson and Charles Dickerman.	Westfield, Mass....	Aug. 3, 1839
Paper, sizing†.....	John Ames.....	Springfield, Mass....	Dec. 1, 1837
Paper, sizing‡.....	Lorenzo D. Brown....	Lee, Mass.....	Mar. 4, 1842
Paper, trimming machine.....	Parke Shee.....	Philadelphia, Pa....	Feb. 7, 1807
Paper, trimming machine.....	John McClintic.....	Chambersburg, Pa.	Mar. 31, 1827
Paper, vats, heating pulp in.....	Joseph Robeson.....	Montgomery, Pa....	May 22, 1816
Paper, for walls.....	James P. Howland and Alfred Griswold....	Muncney, Pa.....	Aug. 10, 1833
Paper, water marks.....	Jac. Perkins and Tho- mas Gilpin.....	Philadelphia, Pa....	Dec. 18, 1816
Pasteboard, &c., manufacturing..	Frederick A. Taft....	Dedham, Mass....	July 20, 1831
Paste paper, for band-boxes.....	Isaac Sanderson.....	Milton, Mass.....	May 15, 1830
Picker, cotton.....	J. Pennell & H. Maxon	Bourbourville, Va....	Oct. 10, 1828
Picker, and lap machine.....	Jesse Whitehead.....	Godwinville, N. J....	July 22, 1833
Picker, and spreading cotton.....	John C. Whiten.....	Northbridge, Mass....	July 20, 1832
Picker, wool.....	Michael Morrison....	Boston, Mass.....	Aug. 15, 1811
Picker, wool.....	Beriah Brown.....	Exeter, R. I.....	Sept. 2, 1822
Picker, wool and cotton.....	Ephraim Raymond....	Norton, Mass.....	Jan. 18, 1812
Picking and breaking wool.....	John Shly.....	Augusta, Ga.....	Oct. 27, 1836

*Disclaimer May 13, '47. †Retained May 22, '26, Feb. 19, '30. ‡Retained Oct. 22, '40. §Antedated Sep. 4, '41.

INVENTOR OR DISCOVERER.	PATENTEE.	REFERENCE.	WEEK ISSUED.
Plates, for pressing woollen cloths	Volkert Vedder.....	Amsterdam, N. Y....	Feb. 6, 1811
Printing, calico.....	Alexander Boyd.....	Providence, R. I....	April 23, 1845
Pulp, dresser.....	Elihu H. Thomas and Nathan Woodcock.....	Brattleborough, Vt....	Aug. 11, 1830
Pulp, dresser.....	Coleman Sellers.....	Philadelphia, Pa....	June 6, 1832
Pulp, preparing and dressing.....	John Ames.....	Springfield, Mass....	Sept. 1, 1832
Pulp, sifter.....	Sidney A. Sweet.....	Tyringham, Mass....	Dec. 31, 1833
Pulp, strainer.....	James Sawyer.....	Newbury, Vt.....	Jan. 21, 1832
Pulp, washing.....	Francis Goucher.....	Chester county, Pa....	April 12, 1833
Pulp dressing, of which paper is made.....	Nathaniel Hebard.....	Dorchester, Mass....	Dec. 27, 1839
Rags, boiling and washing for the manufacture of paper.....	George Spafford.....	Windham, Conn....	Sept. 2, 1840
Rags, cleaning*.....	William Debit.....	East Hartford, Conn....	Jan. 13, 1828
Rags, cleaning.....	George Carriel.....	Manchester, Conn....	July 27, 1831
Rags, cleaning†.....	George Carriel.....	Manchester, Conn....	Feb. 7, 1832
Rags, cleaning.....	William Debit.....	Hartford, Conn....	July 1, 1836
Rags, cleaning and dusting.....	Samuel E. Foster.....	Brattleborough, Vt....	June 1, 1832
Rags, cleaning machine for.....	James Phelps.....	West Sutton, Mass....	Nov. 24, 1843
Rags, cutting.....	Moses Y. Beach.....	Springfield, Mass....	Oct. 11, 1828
Rags, dusting.....	E. Burt and G. Carriel.....	Manchester, Conn....	Nov. 28, 1836
Rags, dusting.....	Enoch Burt.....	Manchester, Conn....	Sept. 14, 1838
Rags, dusting and tearing.....	Henry Clark and Wil- liam Albertson.....	New London, Conn....	Sept. 19, 1838
Rags, preparing.....	Benjamin Cox.....	Northampton, Mass....	Mar. 28, 1818
Rags, washing.....	John Ames.....	Springfield, Mass....	April 6, 1831
Rags, washing.....	D. Ames, jr., and John Ames, assignees of Samuel Eckstein.....	Philadelphia, Pa....	June 13, 1831
Rags, washing.....	Robert Carter.....	Elkton, Md.....	Feb. 22, 1838
Reel for chalk lines.....	Gerard Sickles.....	Middletown, Conn....	Dec. 31, 1839
Reeling, spinning, and twisting silk	Jacob Prau.....	Sherburne, Mass....	Oct. 12, 1839
Ribbons, smoothing and glazing.....	Charles Cromwell.....	New York.....	Jan. 27, 1817
Rollers, calendering, heating, for glazing.....	J. Bringham and T. Keyes, jr.....	W. Boyleston, Mass....	April 1, 1826
Rollers, covering, for sizing.....	Evert Williams.....	Strafford, N. H.....	April 13, 1822
Rolling, vibratory, for cotton or wool.....	Jesse Hopkins.....	Strasburg, Pa.....	Jan. 14, 1824
Ropes.—See <i>Hides</i> , Class 16.			
Ropes, machinery for laying.....	S. & James A. Bazin.....	Canton, Mass.....	Feb. 28, 1844
Ropes, making.....	Charles Durfee, as- signee of Edward S. Townsend.....	Palmyra, N. Y.....	Feb. 28, 1845
Sand paper.....	Isaac Fisher, jr.....	Springfield, Vt.....	June 14, 1834
Sand paper.....	Isaac Fisher, jr.....	Springfield, Vt.....	June 14, 1834
Sand paper.....	Isaac Fisher, jr.....	Springfield, Vt.....	June 14, 1834
Sand paper, softening.....	Isaac Fisher, jr.....	Springfield, Vt.....	June 14, 1834
Sewing machine.....	Elias Howe, jr.....	Cambridge, Mass....	Sept. 10, 1846
Shearing cloth.....	Beriah Swift.....	Washington, N. Y....	May 25, 1806
Shearing cloth.....	Russell Dorr.....	Kinderhook, N. Y....	May 8, 1807
Shearing cloth.....	Enoch Burt.....	Princeton, N. J.....	June 23, 1807
Shearing cloth.....	Simpson Stewart, E. Hovey, and James Henderson.....	Pittstown, N. Y....	June 21, 1806
Shearing cloth.....	David Dewey.....	Poultney, Vt.....	June 27, 1809
Shearing cloth.....	Eben Sprague.....	Danbury, Conn....	May 9, 1810
Shearing cloth.....	Heman Matthews.....	Delaware.....	May 15, 1810
Shearing cloth.....	Beriah Swift.....	New York.....	May 24, 1810
Shearing cloth.....	Ezra Wilmarth.....	Romney, Mass.....	Feb. 28, 1811
Shearing cloth.....	Benjamin Cummings.....	Palmer, Mass.....	March 2, 1811
Shearing cloth.....	George C. Kellogg.....	New Hartford, Conn....	March 4, 1811
Shearing cloth.....	Jesse Mollineux.....	Hemstead, N. Y....	April 28, 1811
Shearing cloth.....	Eleazer Hovey.....	Canaan, N. Y.....	May 2, 1811
Shearing cloth.....	Stephen Treadwell.....	Redding, Conn.....	April 27, 1812

* Returned July 21, 1826.

† Returned July 1, 1836.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	DATE GRANTED.
Shearing cloth	William Stillman.....	Westerly, R. I.....	June 11, 1832
Shearing cloth	Walter Kennedy.....	Frankfort, Ky.....	June 12, 1832
Shearing cloth	Gershom Boetwick....	Brookfield, Conn....	Sept. 28, 1832
Shearing cloth	George Booth.....	Poughkeepsie, N. Y..	Oct. 12, 1832
Shearing cloth	Isaac Sanford.....	Providence, R. I.....	Mar. 26, 1832
Shearing cloth	Beriah Swift.....	Washington, N. Y....	July 1, 1834
Shearing cloth	C. H. Orth and Freder- rick Strohn.....	Steuenville, Ohio..	Oct. 11, 1814
Shearing cloth	Horace Osborne and William L. Frazer .....	.....	April 25, 1816
Shearing cloth	John D. Smith.....	Fredericktown, Md..	May 24, 1816
Shearing cloth	Eliphalet Remington..	Frankfort, N. Y.....	Aug. 13, 1817
Shearing cloth	William Stillman.....	Westerly, R. I.....	Jan. 17, 1818
Shearing cloth	David Dewey.....	Rutland county, Vt..	Mar. 16, 1818
Shearing cloth	Seth Parsons.....	Hosack, N. Y.....	March 2, 1819
Shearing cloth	Elihu Hotchkiss and Aaron Jaque.....	Battleborough, Vt..	Dec. 15, 1819
Shearing cloth	Zach. Cary.....	Oxford, Maine.....	Feb. 20, 1821
Shearing cloth	Ezra Heald.....	Norridgewock, Me..	Dec. 4, 1822
Shearing cloth	Beriah Swift.....	Washington, N. Y..	Feb. 7, 1824
Shearing cloth	William Hovey.....	Worcester, Mass....	Dec. 17, 1824
Shearing cloth	James Collins.....	Anson, Maine.....	March 6, 1827
Shearing cloth	Isaac Kellogg and Geo. C. Kellogg.....	New Hartford, Conn..	April 7, 1826
Shearing cloth*	Reuben Daniels.....	Woodstock, Vt.....	May 13, 1834
Shearing cloth	John Davidson.....	Springfield, Vt.....	May 29, 1834
Shearing cloth, &c., diamond figure	Charles P. Barber....	Watervliet, N. Y....	Mar. 10, 1843
Shearing cloth, and laying the nap	Lemuel Dickerman....	Sahticoke, N. Y.....	July 18, 1812
Shearing cloth, revolving shears..	James Collins.....	Anson, Maine.....	June 10, 1827
Shearing cloth, shears for	Samuel A. Britt.....	Cazenovia, N. Y....	Aug. 10, 1829
Shearing cloth, by wheel of knives	Samuel G. Dorr.....	Albany, N. Y.....	Oct. 20, 1792
Shearing machine.....	Silas Hills.....	Hudson, N. Y.....	Oct. 22, 1813
Shearing machine.....	William Stillman.....	Westerly, R. I.....	April 28, 1815
Shearing machine, horizontal....	Thomas Blanchard....	Sutton, Mass.....	May 4, 1813
Shearing machine, or shears with curved edges.....	Samuel Fry.....	New York.....	Nov. 20, 1823
Shearing machine, vibrating.....	David Dewey.....	Poultney, Vt.....	Dec. 7, 1814
Shearing machine, zigzag.....	Edmund Durrin.....	Weatherfield, Vt....	Jan. 21, 1814
Shearing nap from woollen cloth..	Merritt Hurd.....	Augusta, N. Y.....	Dec. 7, 1829
Shearing sattinets and other wool- len goods.....	James Pitts.....	Smithfield, R. I.....	Oct. 17, 1842
Shearing wool and cloths.....	Samuel Kellogg.....	Vermont.....	Jan. 31, 1795
Shearing wool.....	Eb. Stowell.....	Worcester, Mass....	April 26, 1806
Shearing woollen cloths.....	Liberty Stanley.....	Massachusetts.....	June 25, 1803
Shearing woollen cloths.....	Friend B. Kellogg....	Marlborough, Mass..	Nov. 22, 1805
Shearing woollen cloth†.....	Reuben Daniels.....	Woodstock, Vt.....	April 7, 1838
Shearing woollen cloth†.....	Seth Parsons.....	Hoosic Falls, N. Y..	Nov. 25, 1838
Silk finishing, machinery for.....	Thomas White.....	Mount Pleasant, O..	Dec. 30, 1841
Silk reel, driving with foot.....	Aaron Clarke.....	Greenwich, Conn....	Jan. 20, 1841
Silk, reeling from the cocoons, ma- chinery for.....	George Heritage.....	Chestertown, Md....	Dec. 19, 1840
Silk reel.....	Eliphalet Snow.....	Mansfield, Conn....	Mar. 16, 1832
Silk reel.....	Charles G. Greene....	Windsor, Vt.....	May 31, 1832
Silk, reeling.....	Jonathan Dennis, jr..	Portsmouth, R. I....	Dec. 28, 1838
Silk, reel for reeling.....	A. B. Jones, assignee of William H. Jones	Hartford, Conn.....	Feb. 12, 1842
Silk reels.....	James S. Harris.....	Poultney, Vt.....	July 30, 1844
Silk skeining, machinery for.....	George Heritage.....	Chestertown, Md....	Nov. 26, 1840
Silk twisting.....	Gamaliel Gay.....	Philadelphia, Pa....	June 7, 1839
Silk, throwing or twisting.....	Lucillius H. Mosely..	Poughkeepsie, N. Y..	May 9, 1835
Silk, unwinding.....	Gamaliel Gay.....	Poughkeepsie, N. Y..	Aug. 17, 1835
Silk, winding.....	Adam Brooks.....	South Scituate, Mass.	June 20, 1836
Silk, winding, gimp or cord.....	Adam Brooks.....	South Scituate, Mass.	June 20, 1836
Silkworms, cocoonary for.....	J. B. Tillinghast.....	Huron, Ohio.....	Nov. 10, 1841

* Released August 22, 1834.

† Antedated October 2, 1837.

‡ Antedated May 25, 1838.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	DATE PAID.
Spinning worms, feeding of, apparatus for	Edmund Morris.....	Burlington, N. J.....	June 16, 1842
Spinning worms, feeding.....	John W. Gall.....	Mount Pleasant, Ohio.....	May 12, 1842
Spinning paper, machine for drying..	Joshua Norton, jr....	Boston, Mass.....	April 25, 1845
Spinning fliers.....	Erastus B. Bigelow...	Boston, Mass.....	Feb. 24, 1845
Spindle, mode of steadying the live*	Alexander Anderson...	Patterson, N. J.....	Nov. 21, 1845
Spinning, accelerated.....	Leonard Norcross....	Dixfield, Maine.....	June 15, 1845
Spinning, bobbins, method of operating in machinery for spinning fibrous substances.....	Francis McCully, jr..	Patterson, N. J.....	Oct. 30, 1844
Spinning candle wick.....	Shalor Ives.....	Chillicothe, Ohio.....	May 17, 1830
Spinning, cap spinner, mode of driving bobbins in.....	Charles Danforth....	Patterson, N. J.....	April 21, 1842
Spinning, cap spinner, oiling the spindles or tubes of.....	Charles Danforth....	Patterson, N. J.....	April 21, 1842
Spinning, cap speeder for.....	Truman Estes & Warren Dutcher.....	Bennington, Vt.....	July 26, 1839
Spinning cotton.....	William Pollard.....	Philadelphia, Pa.....	Dec. 30, 1791
Spinning cotton.....	Nehemiah Giles.....	Fitchburg, Mass.....	Nov. 19, 1812
Spinning cotton.....	L. Bissell, J. Hinman, L. C. Hinman, and Benoni Gains.....	Hartwick, N. Y....	June 19, 1813
Spinning cotton.....	L. Bissell, L. C. Hinman, and S. Wilson	Oscego, N. Y.....	July 17, 1815
Spinning cotton.....	Elisha Fuller.....	Attleborough, Mass.	Feb. 6, 1823
Spinning cotton.....	William Bryant.....	Mill creek, Tenn....	Sept. 30, 1823
Spinning cotton.....	William Haworth.....	Providence, Mass., Pa.	June 2, 1824
Spinning cotton.....	John Brown.....	Stonington, Conn....	June 13, 1831
Spinning cotton.....	John L. Eddy.....	Killingly, Conn....	Nov. 19, 1833
Spinning cotton.....	Welcome A. Potter....	Cranston, R. I.....	Dec. 16, 1833
Spinning cotton.....	Asahel M. Lanpher....	Killingly, Conn....	Mar. 19, 1834
Spinning cotton.....	Welcome A. Potter....	Cranston, R. I.....	Mar. 28, 1834
Spinning cotton.....	William P. Brayton....	New York city.....	June 25, 1836
Spinning cotton bagging.....	John C. Dewes.....	Mason county, Ky....	Dec. 28, 1837
Spinning cotton, frame for.....	Paul Moody.....	Boston, Mass.....	May 6, 1819
Spinning cotton, frame for.....	William Bald, jr....	Providence, R. I....	Oct. 10, 1830
Spinning cotton, frame for.....	Paul Moody.....	Boston, Mass.....	Feb. 19, 1821
Spinning cotton seine twine.....	Thomas Rice.....	Petersburg, Va.....	Oct. 1, 1830
Spinning cotton and silk.....	Samuel P. Mason.....	Killingly, Conn....	Jan. 17, 1834
Spinning cotton twine.....	Alson Pond.....	Petersburg, Va.....	April 21, 1839
Spinning cotton, water frame for..	Stephen Clements....	Hartford, Vt.....	Mar. 16, 1812
Spinning cotton and wool.....	G. Brewster, G. Trumbull, and J. Mathes.	Barre, Vt.....	Jan. 16, 1812
Spinning cotton and wool.....	Joseph Hathaway....	Poultney, N. Y....	July 24, 1836
Spinning cotton and wool.....	John W. Wheeler....	Galway, N. Y.....	Oct. 11, 1838
Spinning cotton and wool.....	Levi Rice.....	Milburn, Mass.....	Nov. 14, 1831
Spinning cotton yarn.....	Peleg Arnold.....	Coventry, Conn....	Aug. 1, 1818
Spinning cotton yarn.....	Luther Crane.....	Ware, N. H.....	Mar. 26, 1826
Spinning cotton yarn.....	John Thorpe.....	Providence, R. I....	Nov. 11, 1830
Spinning cotton yarn and thread..	John A. Bradshaw....	Foxborough, Mass....	Jan. 18, 1833
Spinning cotton yarn, and roping..	James Chesters.....	Cumberland, R. I....	April 16, 1834
Spinning cotton roving, &c., for condensing.....	Jacob Graves.....	New Ipswich, N. H.	Sept. 1, 1843
Spinning cotton wool.....	Amander N. Wilcox..	Milton, N. Y.....	May 8, 1843
Spinning, double speeder or fly frame used in roving cotton....	William C. Duvoll....	Fall River, Mass....	May 19, 1843
Spinning, driving bobbins.....	William Baxter.....	Patterson, N. J.....	Sept. 30, 1845
Spinning filling, and slack twisted yarn.....	John Thorpe.....	Providence, R. I....	Nov. 25, 1826
Spinning flax, cotton, and silk....	John Bogardus.....	New York.....	May 25, 1830
Spinning flax, cylindrical frame..	William Griffin.....	New York.....	Jan. 11, 1812
Spinning flax and hemp.....	George Parkinson....	Philadelphia, Pa....	Mar. 17, 1791
Spinning flax and hemp.....	Alpheus Webster.....	Greene county, N. Y.	Mar. 31, 1810
Spinning flax and hemp.....	W. Hunt and W. Haskins.....	Martinsburg, N. Y..	June 22, 1826

* Antedated May 31, 1845.

INCREASES OR DECREASES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Spinning flax, reeling and spooling	Noel Jones	Madison co., N. Y.	Mar. 14, 1832
Spinning, fliers	Samuel Ladd	Waltham, Mass.	Feb. 20, 1832
Spinning, flier and dead spindle for	Pinneas Stephens	Nashua, N. H.	April 20, 1832
Spinning, fliers	Samuel Ladd	Waltham, Mass.	May 6, 1832
Spinning, fliers, boring, &c.—See Class 2.			
Spinning, fliers, cotton	John Morse	Newton, Mass.	June 25, 1832
Spinning, fliers, cotton yarn	Azariah Walton	Keene, N. Y.	Jan. 6, 1812
Spinning, fliers, cotton yarn	Martin Newton	Fitchburg, Mass.	Sept. 28, 1812
Spinning, fliers, cotton yarn	Nehemiah Giles	Fitchburg, Mass.	Nov. 19, 1812
Spinning, fliers, for double speeders	Otis Pettie	Newton, Mass.	Mar. 28, 1834
Spinning, fliers, flax and hemp	H. Evans & B. Churchill	Plymouth, Mass.	Sept. 26, 1838
Spinning, fliers, & spindles, cotton	Richard E. Yerkes	Philadelphia, Pa.	June 12, 1838
Spinning, fliers, & spindles, cotton	John Hoarth & Nathan Jones	Andover, Mass.	Dec. 28, 1838
Spinning, fliers, for wheels	James Wilson	Monroe county, Ky.	Feb. 16, 1833
Spinning hair of neat cattle	William Shotwell and Arthur Kimball	New York	Nov. 4, 1813
Spinning hemp, &c.	James Lang	Greenock, Scotland	Jan. 16, 1834
Spinning hemp, &c.	Moses Day	Roxbury, Mass.	June 2, 1836
Spinning hemp and flax*	Nathaniel Foster	Flemingsburg, Ky.	June 28, 1809
Spinning hemp and flax	John F. Chappins	New York	Nov. 8, 1814
Spinning hemp and flax	Daniel Treadwell	Boston, Mass.	Oct. 11, 1831
Spinning hemp and flax	Andrew Caldwell	Lexington, Ky.	Aug. 20, 1835
Spinning hemp and other fibrous materials	Charles W. Brown	Roxbury, Mass.	July 16, 1839
Spinning hemp, flax	Moses Day	Roxbury, Mass.	June 2, 1836
Spinning hemp, flax	Moses Day	Roxbury, Mass.	June 24, 1839
Spinning, hook spinner and twister, whirling and rotary	John Thorp	N. Wrentham, Mass.	Sept. 27, 1844
Spinning jenny	Cyrus Greenwood	Winchester, N. H.	Feb. 13, 1830
Spinning jenny and billy	Ebenezer Smith	Paris, N. Y.	Mar. 23, 1814
Spinning jenny, vertical	James Matthews	Schenectady, N. Y.	May 2, 1826
Spinning machine	Jac. Alricks	Wilmington, Del.	Oct. 11, 1809
Spinning machine	Daniel Read	Brookfield, N. Y.	Sept. 10, 1811
Spinning machine	Sylvanus Baldwin and Elisha Town	Vermont	May 6, 1812
Spinning machine	Alpheus Webster	Greene co., N. Y.	Dec. 21, 1812
Spinning machine	Burgess Allison	Burlington, N. J.	Mar. 3, 1813
Spinning machine	John Brown	Providence, R. I.	May 12, 1813
Spinning machine	John Brown	Providence, R. I.	Feb. 24, 1814
Spinning machine	Sylvanus Baldwin	Boston, Mass.	Aug. 18, 1815
Spinning machine	Zaccheus Wheeler	Richmond, N. H.	July 18, 1816
Spinning machine	John Brown	Providence, R. I.	Aug. 11, 1821
Spinning machine	C. Merrill, C. Batchelor, & S. King, jr.	Lowville, N. Y.	July 3, 1824
Spinning machine	D. Pool & A. Copeland	Philadelphia, Pa.	Dec. 24, 1824
Spinning machine	H. Hunt & C. Bradish	Lowville, N. Y.	Dec. 31, 1824
Spinning machine	Sidney White	Wrentham, Mass.	Dec. 24, 1824
Spinning machine	Samuel Slater	Middletown, Vt.	April 4, 1825
Spinning machine	J. R. & J. B. Wheeler	Kingsbury, N. Y.	May 26, 1825
Spinning machine	J. R. & J. B. Wheeler	Galway, N. Y.	Nov. 3, 1826
Spinning machine	Nathaniel Remington	Geneva, N. Y.	April 21, 1827
Spinning machine	Henry Wilson	Pomfret, N. Y.	July 13, 1827
Spinning machine	John Thorpe	Providence, R. I.	Dec. 31, 1828
Spinning machine	John Thorpe	Providence, R. I.	Jan. 23, 1829
Spinning machine	John Thorpe	Providence, R. I.	Nov. 25, 1828
Spinning machine	John Thorpe	Providence, R. I.	June 13, 1829
Spinning machine	Warren Allen	New Haven, N. Y.	Aug. 15, 1829
Spinning machine	Joseph B. Wheeler	Galway, N. Y.	Dec. 30, 1829
Spinning machine	John Brown	Providence, R. I.	May 20, 1830
Spinning machine	James Church, jr.	Hartford, Ct.	May 22, 1830
Spinning machine	John Pearce	Yorkshire, N. Y.	June 30, 1830
Spinning machine	Ethan Bowen	Providence, R. I.	July 13, 1830

* Reissued July 8, 1812.

† Reissued Oct. 25, 1826.

‡ Reissued April 8, 1826.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Spinning machine.....	William Clarke.....	Poultney, N. Y....	Oct. 1, 1838
Spinning machine.....	John Morgan.....	Manayunk, Pa.....	May 14, 1838
Spinning machine, domestic.....	Eb. Herrick.....	Albany, N. Y.....	Aug. 17, 1810
Spinning machine, domestic.....	Elias Wood.....	Lowville, N. Y....	Sept. 3, 1824
Spinning machine, domestic.....	Lafford Totten.....	Schoharie, N. Y....	Nov. 22, 1826
Spinning machine, domestic.....	Edward Penny.....	Adams, N. Y.....	June 27, 1828
Spinning machine, domestic.....	Hiram F. Wheeler....	Springfield, Pa....	April 25, 1838
Spinning machine, family.....	J. Watt, F. A. Priest, and G. Freeman.....	Jefferson co., Ohio..	May 20, 1826
Spinning machine, family.....	William Jones.....	Thornville, Ohio....	July 27, 1827
Spinning machine, family, and bobbin winder.....	John Gill.....	Plumb towns'p, N.Y.	Feb. 19, 1825
Spinning machine, family, cotton.	John G. Baxter.....	Philadelphia, Pa....	June 22, 1811
Spinning machine, family, and fac- tory.....	Richard Woolsey....	Kortwright, N. Y....	May 13, 1825
Spinning machine, family, wool..	W. Ayres & J. Cochran	Durham, Vt.....	Oct. 6, 1815
Spinning machine, horizontal.....	J. S. and B. J. Billings	Moreau, N. Y.....	Jan. 16, 1826
Spinning machine, horizontal....	D. Hunt & S. Wheeler	Knox, N. Y.....	May 2, 1826
Spinning machine, portable.....	Burgess Allison.....	Philadelphia, Pa....	April 27, 1812
Spinning machine, portable.....	Burgess Allison.....	Burlington, N. J....	June 26, 1814
Spinning machine, and receiving rolls of wool.....	Gilbert Brewster....	Norwich, Conn....	Mar. 13, 1824
Spinning machine, stop motion of the drawing frames.....	Lewis Cutting.....	Lowell, Mass.....	May 15, 1834
Spinning machine, substitute for spier.....	O. G. & N. Rogers...?	Whitestown, N. Y....	Aug. 28, 1824
Spinning mule, carriage for cotton	William Haworth....	Providence t'wn'p Pa	June 2, 1824
Spinning mule, cotton.....	Thomas Walker.....	Chester county, Pa..	June 26, 1828
Spinning mule, drums.....	J. Butterworth.....	Philadelphia, Pa....	Dec. 30, 1828
Spinning mule, head.....	Henry Hopkins.....	Providence, R. I....	Feb. 22, 1833
Spinning mule, self acting*.....	James Smith.....	Perth, Scotland....	June 27, 1838
Spinning mule, self operating....	Ira and A. Gay.....	Dunstable, N. H....	April 10, 1829
Spinning, mule, self-acting for....	Dan'l Lapham, adm'r of Benj. Lapham, dec'd	Adams, Mass.....	Sept. 25, 1840
Spinning, mule, self-acting for....	William Mason.....	Taunton, Mass.....	Oct. 8, 1840
Spinning, mule, self-acting, bil- leys, &c.....	Richard Roberts.....	Manchester, England	Oct. 11, 1841
Spinning and quilting, with heads.	Emory Russell.....	Long Meadow, Mass	April 18, 1814
Spinning railway, drawing head for.....	William B. Leonard..	Fishkill, N. Y.....	Sept. 16, 1833
Spinning, regulating the drag of the yarn in the operation of.....	Jesse Whitehead....	Manchester, Va....	June 18, 1842
Spinning reel.....	Samuel McCawley....	Fallston, Pa.....	Dec. 2, 1834
Spinning and reeling.....	Caleb Shilliday & Geo. McCaston.....	Shelbyville, Ky....	Oct. 24, 1816
Spinning and reeling.....	Joseph Woodhull....	Chester, N. Y.....	Nov. 14, 1826
Spinning, ring spinner.....	David Hunter.....	Laurel factory, Md.	July 23, 1841
Spinning, roping.....	Gideon Cornell.....	Rensselaer co., N.Y.	July 22, 1812
Spinning, roping, cotton.....	William Bryant.....	Davidson, co., Tenn.	April 29, 1816
Spinning, roping, cotton.....	Paul Moody.....	Boston, Mass.....	Jan. 19, 1821
Spinning, roping, cotton.....	Paul Moody.....	Boston, Mass.....	Feb. 19, 1821
Spinning, roping, cotton.....	Silas Shepard & C. Dean	Taunton, Mass.....	Mar. 23, 1821
Spinning, roping, cotton||.....	Asa Arnold.....	N. Providence, R. I.	Jan. 21, 1823
Spinning, roping, cotton.....	Gilbert Brewster....	Poughkeepsie, N. Y.	Mar. 26, 1827
Spinning, roping, cotton.....	Asa Whitman and Joel Baker.....	Walpole, Mass.....	July 20, 1831
Spinning, roping, cotton.....	John A. Bradshaw....	Foxborough, Mass..	Dec. 8, 1832
Spinning, roping, cotton.....	Lucillius H. Moseley.	Lisbon, Conn.....	Nov. 19, 1833
Spinning, roping, cotton.....	Lewis Brewster, adm'r of Gilbert Brewster.	Poughkeepsie, N. Y.	Dec. 17, 1834
Spinning, roping, cotton.....	William Fowler.....	Fishkill, N. Y.....	Mar. 23, 1836
Spinning, roping, cotton.....	Charles Danforth....	Patterson, N. J.....	Feb. 18, 1841
Spinning, roping, cotton, &c.....	Sidney Whiting.....	Franklin, Mass.....	Nov. 17, 1824

* Antedated Feb. 20, '24. † Antedated Dec. 15, '40. ‡ Antedated Dec. 21, '42. § Retained Aug. 10, '78.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	DATE ISSUED.
Spinning, roping, cotton, &c., by hand	John Brown.....	Providence, R. I....	Jan. 23, 1831
Spinning, roping, cotton and wool.	John Brown.....	Providence, R. I....	Aug. 8, 1819
Spinning, roping, cotton and wool.	William Whitehead..	Patterson, N. J....	April 11, 1825
Spinning, roping, and doubling cotton, silk.....	James Jones.....	Manchester, England	May 16, 1835
Spinning, roping, flax and hemp.	George Brown.....	Scahicoke, N. Y....	June 19, 1806
Spinning, roping, flax & hemp, &c.	Daniel Treadwell.....	Boston, Mass.....	Feb. 3, 1834
Spinning, roping, or slubbing, woolen	Austin Steele.....	Waterbury, Conn..	April 1, 1830
Spinning, roping, & twisting cotton	William Whitehead, jr.	Patterson, N. J....	June 14, 1826
Spinning, roping, & twisting, from speeders.	Wm. Fowler & Rich. M. Germond.....	Union Vale, N. Y..	Nov. 24, 1824
Spinning, roping, and winding cotton	David Grieve.....	Providence, R. I....	Sept. 18, 1818
Spinning, roping, wool.....	Samuel Lerner	Watertown, Mass..	Aug. 3, 1815
Spinning, roping, wool.....	J. R. & J. B. Wheeler	Galway, N. Y....	Aug. 28, 1826
Spinning, roping, wool and cotton	Oliver Barret, jr.....	Scahicoke, N. Y....	Dec. 3, 1811
Spinning, roping, wool and cotton	John Brown.....	Providence, R. I....	July 22, 1819
Spinning, roping, wool and cotton	Z. Knox & W. Haskins	Lowville, N. Y....	Aug. 16, 1824
Spinning, roping, wool and cotton	A. Patterson and F. Burdock.....	Delaware co., N. Y.	Sept. 29, 1824
Spinning, roping, wool and cotton	Francis Burdick.....	Kortwright, N. Y..	May 30, 1825
Spinning, roping, wool and cotton	William Carmichael..	Sandlake, N. Y....	June 10, 1826
Spinning, roving.....	Samuel Comstock and Moses Pike.....	Harrisburg, Pa....	April 15, 1813
Spinning, silk, &c.....	George Addison and L. S. Stevens.....	New York.....	Oct. 10, 1829
Spinning silk, &c.....	Adam Brooks.....	Scituate, Mass.....	June 29, 1833
Spinning silk, &c.....	Harrison Holland.....	Northampton, Mass.	Oct. 10, 1838
Spinning silk, doubling & twisting	Jonathan Dennis, jr...	Portsmouth, R. I...	Dec. 28, 1838
Spinning silk from cocoons, machinery for.....	George Heritage.....	Chestertown, Md...	Dec. 19, 1840
Spinning, speeder for cotton roping counter-twist.....	Jesse Whitehead.....	Manchester, Va....	May 29, 1841
Spinning, speeder, cotton.....	Luman Parmelee.....	Poughkeepsie, N. Y.	Aug. 29, 1833
Spinning speeder, cotton roving.....	Samuel P. Mason.....	Leesville, Conn....	June 24, 1830
Spinning, speeder, cotton, roving.	William Mason.....	Taunton, Mass.....	May 4, 1838
Spinning, speeder, counter-twist g	George Danforth.....	Morton, Mass.....	Sept. 2, 1824
Spinning, speeder, double.....	Paul Moody.....	Boston, Mass.....	April 3, 1819
Spinning, speeder, double, No. 1.	Jonathan Fish.....	Medway, Mass.....	Dec. 7, 1820
Spinning, speeder, double, No. 2.	Jonathan Fish.....	Medway, Mass.....	Dec. 7, 1820
Spinning, speeder, double, No. 3.	Jonathan Fish.....	Medway, Mass.....	Dec. 7, 1820
Spinning, speeder, double, No. 4.	Jonathan Fish.....	Medway, Mass.....	Dec. 7, 1820
Spinning, speeder, double, No. 5..	Jonathan Fish.....	Medway, Mass.....	Dec. 7, 1820
Spinning, speeder, double.....	Paul Moody.....	Waltham, Mass.....	Dec. 30, 1820
Spinning, speeder, double.....	Paul Moody.....	Boston, Mass.....	Feb. 19, 1821
Spinning, speeder, double.....	William Field.....	N. Providence, R. I.	Oct. 6, 1835
Spinning, speeder, double combination.....	Jonathan Fish.....	Medway, Mass.....	Dec. 7, 1826
Spinning, speeder, double, winding cotton.....	William Hines.....	Coventry, R. I....	Feb. 6, 1819
Spinning, speeder, double, eclipse, for cotton roping.....	Gilbert Brewster.....	Poughkeepsie, N. Y.	April 18, 1829
Spinning, speeder, flier.....	Peleg Arnold.....	Killingly Centre, Ct.	Oct. 6, 1830
Spinning, speeder, twisting.....	Joseph C. Dyer.....	Manchester, Eng...	Oct. 1, 1830
Spinning, spindle.....	Asa Jilson.....	Dorchester, Mass...	May 27, 1815
Spinning, spindle, and bobbin, for cotton.....	Wm. B. Leonard.....	Fishkill, N. Y....	Jan. 9, 1819
Spinning, spindle, cotton.....	Benjamin Brundred.....	Oldham, N. J....	July 14, 1827
Spinning, spindle, cotton.....	Nathaniel Rider.....	Dudley, Mass.....	Nov. 3, 1833
Spinning, spindle, dead.....	Henry G. Davis.....	Northborough, Mass	Sept. 9, 1835
Spinning, spindle, diminishing friction.....	R. R. Livingston.....	Clermont, N. Y....	Aug. 4, 1791

* Additional improvements Oct. 11, 1841.

† Retained Dec. 20, 1830.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCES.	WARRANT DATES.
Spinning, spindle, and fier.....	Asa Jilson.....	Roxbury, Mass....	July 17, 1825
Spinning, spindle, and fier.....	W. T. Eddy.....	Ithaca, N. Y.....	Feb. 10, 1825
Spinning, spindle, fier and bobbin	Thomas Godden.....	Saddle River p, N. J.	Feb. 11, 1825
Spinning, spindle, preventing friction.....	J. G. Sholtz.....	Pickaway town p, O.	July 6, 1827
Spinning, spindle, rotary and stationary.	C. Jackson, St. S. Potter, & John Miller..	Providence, R. I....	April 2, 1828
Spinning, spindle, still and can, roping.....	John Irwin.....	Coventry, R. I.....	Mar. 26, 1830
Spinning, spindle, wool.....	Russel Phelps.....	Andover, Mass.....	Dec. 21, 1830
Spinning, splicing cotton & woolen rolls.....	Gardner Barton, jr....	Shaftsbury, Vt.....	April 22, 1826
Spinning thread, of wool.....	William Bell.....	Fayette co., Ky.....	June 1, 1825
Spinning, throstle.....	Samuel Blydenburg....	New York.....	Nov. 10, 1829
Spinning, throstle.....	Charles Danforth.....	Patterson, N. J.....	April 1, 1830
Spinning, throstle, bobbin & spool	Thomas Van Riper....	Patterson, N. J.....	Aug. 16, 1826
Spinning, throstle, cotton spinner.	Benjamin Brundred....	Mamaroneck, N. Y....	Jan. 17, 1824
Spinning, throstle frame.....	Henry Ruggles.....	New York.....	Nov. 24, 1828
Spinning, throstle frame, and bobbin regulator.	John Brown and John Standish.	Providence & Cranston, R. I.....	June 13, 1831
Spinning, throstle frame, & spinning cotton.....	Seth Simmons.....	Providence, R. I....	Jan. 16, 1839
Spinning, throstle, spindle.....	C. Lewis & C. Taylor	Poughkeepsie, N. Y.	June 26, 1822
Spinning, throstle, spindle.....	Gilbert Brewster.....	Norwich, Ct.....	Mar. 13, 1824
Spinning, throstle, spindle frame.	Benjamin Brundred..	Oldham, N. J.....	May 7, 1830
Spinning, throstle, wool, &c.....	Stephen Shallcross....	New York.....	Jan. 21, 1814
Spinning and twisting cotton.....	John Thorpe.....	Providence, R. I....	Nov. 20, 1826
Spinning, twisting, & kinking hair	Hiram Burnham.....	New York, N. Y....	June 22, 1843
Spinning and twisting, machine for	Charles Danforth.....	Patterson, N. J.....	May 4, 1841
Spinning and twisting straw, hay, &c.....	Philo G. Sheldon.....	Winchester, Ct.....	April 8, 1835
Spinning and twisting thread....	Obadiah Herbert.....	Mt. Pleasant, N. J..	Jan. 26, 1792
Spinning wheel.....	Amos Miner.....	Marcellus, N. Y....	Nov. 16, 1803
Spinning wheel.....	Tim. Cruttenden.....	Poultney, Va.....	April 6, 1808
Spinning wheel.....	Ob. Seely.....	Brookfield, Mass....	Aug. 6, 1808
Spinning wheel.....	William Drury.....	Brookfield, Mass....	Mar. 19, 1810
Spinning wheel.....	James Shaw.....	Herkimer, N. Y....	April 27, 1812
Spinning wheel.....	Daniel Hurlbutt.....	Aurelius, N. Y....	Aug. 4, 1813
Spinning wheel.....	Harvey Wright & O. Roberts.....	Bristol, Ct.....	Mar. 26, 1814
Spinning wheel.....	Elias B. Sanford.....	Newton, Ct.....	April 11, 1816
Spinning wheel.....	James Wright.....	Campbell co., Ky....	Feb. 26, 1817
Spinning wheel.....	Timothy Cruttenden..	New York.....	May 12, 1817
Spinning wheel.....	Zalmon T. Bradley....	Gt. Barrington, Mass	April 21, 1818
Spinning wheel.....	John Brown.....	Providence, R. I....	June 12, 1818
Spinning wheel.....	Henry Wilson.....	Mendon, N. Y.....	Dec. 29, 1818
Spinning wheel.....	Chas. F. Schaffie.....	Lewisburg, Pa.....	Feb. 28, 1824
Spinning wheel.....	Guy Brooks.....	Athol, N. Y.....	April 2, 1824
Spinning wheel, cordage.....	William B. Dyer.....	Baltimore, Md.....	Feb. 27, 1806
Spinning wheel, heads.....	Amos Miner.....	Marcellus, N. Y....	April 11, 1810
Spinning wheel, heads.....	Archelaus Putnam....	Philadelphia, Pa....	July 30, 1811
Spinning wheel, heads.....	William H. Peabody....	Woodbury, Ct.....	Dec. 14, 1812
Spinning wheel, heads.....	Eli Church.....	Homer, N. Y.....	Mar. 18, 1813
Spinning wheel, heads.....	David Loring.....	Canandaigua, N. Y..	Dec. 31, 1813
Spinning wheel, heads.....	Emory Russell.....	Long Meadow, Mass	April 18, 1814
Spinning wheel, heads.....	David Lee.....	Guilford, Ct.....	May 6, 1816
Spinning wheel, heads.....	I. Mudge & M. Hatch	Sherburne, N. Y....	April 19, 1819
Spinning wheel, heads, accelerat'g	Diana H. Tuttle.....	Williamson, N. Y....	May 17, 1824
Spinning wheel, heads, linen.....	Brown Smith & Chas. Stewart.....	Truxton, N. J.....	Dec. 8, 1814
Spinning wheel, heads, linen.....	Jared S. Stewart.....	Springfield, N. Y..	April 19, 1821
Spinning wheel, improvement in.	Hiram F. Wheeler.....	Springfield, Va.....	Dec. 15, 1846
Spinning wheel, linen.....	Benjamin Simmons....	Paris, N. Y.....	July 20, 1820

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Spinning wheel, small.....	Nathan Lewis.....	Canandaigua, N. Y.	Mar. 29, 1817
Spinning wheel, wool.....	Gilbert Brewster.....	Norwich, Ct.....	Feb. 27, 1824
Spinning wicks.....	George Dickinson.....	New York.....	Feb. 21, 1828
Spinning wool.....	John Griggs, jr.....	Ashford, Ct.....	Dec. 30, 1834
Spinning wool.....	J. Correll and Wm. P. Rogers.....	Harpersfield, Ohio..	June 15, 1826
Spinning wool.....	Benjamin Lapham....	Queensbury, N. Y..	June 29, 1837
Spinning wool.....	John Orndorff.....	Russellville, Ky.....	Nov. 10, 1829
Spinning wool.....	David S. Wooster.....	Sheldon, N. Y.....	Feb. 14, 1831
Spinning wool.....	Wm. W. Calvert, R. Southwick, & Alfred Messenger.....	Lowell, Mass.....	Mar. 31, 1839
Spinning wool*.....	Wm. Sykes and Geo. M. Conradt.....	Fredericktown, Md.	Mar. 10, 1834
Spinning wool.....	Asa Campbell.....	Kingston, Pa.....	June 19, 1834
Spinning wool.....	J. Withered.....	Baltimore, Md.....	Mar. 30, 1836
Spinning wool†.....	Isaac B. Hartwell....	Northfield, Vt.....	June 7, 1839
Spinning wool by continued rotary motion.....	Gilbert Brewster.....	Norwich, Ct.....	Mar. 13, 1824
Spinning wool and cotton.....	Peter Paddleford.....	Lyman, N. H.....	May 18, 1816
Spinning wool and cotton.....	Jac. Sprinkel.....	Wythe, Va.....	Aug. 23, 1816
Spinning wool and cotton.....	Jac. Richardson.....	Scipio, N. Y.....	Oct. 16, 1816
Spinning wool and cotton.....	Wm. Brushnell and J. Altoffer.....	Harrisburg, Va.....	Aug. 30, 1821
Spinning wool and cotton.....	Francis Price.....	New York.....	Oct. 5, 1824
Spinning wool and cotton.....	A. S. Wiltse and Joel Farnham.....	Tioga, N. Y.....	June 28, 1825
Spinning wool and cotton.....	Seth Boyden.....	Foxborough, Mass.	Dec. 7, 1826
Spinning wool and cotton.....	Seth Boyden.....	Foxborough, Mass.	Dec. 29, 1826
Spinning wool and cotton.....	William Church.....	Birmingham, Eng..	June 11, 1827
Spinning wool and cotton.....	Arthur Critchfield....	Union township, O..	April 24, 1828
Spinning wool and cotton.....	David Newbrough....	Riley township, O..	April 27, 1833
Spinning wool and cotton by hand	George W. Robinson....	Providence, R. I....	Mar. 16, 1826
Spinning wool and cotton by hand	Nathaniel Harris.....	Fairfield co., Ohio..	Jan. 21, 1829
Spinning wool and cotton, & hemp	Theodore T. Abbott....	Greenland, N. H....	Feb. 26, 1828
Spinning wool and cotton from the roll.....	William R. McCall....	Vincennes, Ind.....	May 12, 1828
Spinning wool, and drawing.....	William Humphreys....	Humphreysville, Ct.	Oct. 4, 1811
Spinning wool, domestic.....	Lafford Touten.....	Schoharie, N. Y....	Nov. 13, 1824
Spinning, wool spinner, domestic.	John Nelson.....	Jefferson, Ohio.....	Jan. 27, 1841
Spinning wool and yarn.....	John Sharp.....	Whitestown, N. Y..	Mar. 13, 1822
Spinning woollen roving.....	Edgar M. Titcomb....	Andover, Mass.....	July 29, 1837
Spinning woollen slubbing.....	Charles Atwood.....	Middletown, Ct.....	Mar. 10, 1830
Spools and bobbins.....	William Clegg.....	Norwich, Ct.....	Feb. 24, 1830
Spools and bobbins.....	Simeon Presbrey, jr..	Canton, Mass.....	July 26, 1832
Spools, frame.....	Elihu Robinson.....	Augusta, Mass.....	Mar. 16, 1816
Stamping or painting on fabrics, design for.‡.....	Spurkman & Kelsey..	New York, N. Y....	July 25, 1846
Straw bonnets, pressing.....	Preston Whiting.....	Hopkins, Mass.....	June 11, 1819
Straw bonnets, pressing.....	Eleazer Smith.....	Walpole, Mass.....	July 15, 1830
Straw bonnets, pressing.....	Simon Pettee.....	Foxborough, Mass..	Sept. 14, 1825
Straw or chip hats, pressing.....	Samuel Prince.....	New York.....	Aug. 31, 1806
Straw and Leghorn bonnets, &c., pressing.....	Otis Plimpton.....	Foxborough, Mass.	Dec. 28, 1832
Straw, plait, cleaning.—See Class 4.	Daniel Atherton.....	Providence, R. I....	April 26, 1811
Straw, plait, trimming & dressing.	Mary Kies.....	Killingly, Ct.....	May 5, 1809
Straw, weaving, with silk or thread	William Pond.....	Wrentham, Mass....	Feb. 28, 1811
Straw, whitening.—See Class 4.	Thos. R. Williams....	Newport, R. I.; now in London.....	April 24, 1840
Stuffs, in which the fibres of various materials are united with adhesive mixtures, machinery for the manufacture of.			

* Reissued March 30, 1836.

† Antedated Feb. 20, 1830.

‡ Antedated March 23, 1846.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WEEK DATED.
Threads or cords, worsted or other, dressing or finishing.	Benjamin B. Tilt and James Skinner.....	Roxbury, Mass....	July 8, 1843
Tenter bars, circular.....	Stephen R. Parkhurst	Meriden, R. I.....	Dec. 2, 1834
Tenter bars, circular.....	Stephen R. Parkhurst	Worcester, Mass....	Oct. 28, 1835
Thread, packing.....	Reuben Landon.....	Hartford, Conn....	June 20, 1821
Thread, preventing from waste...	John Golding.....	Dedham, Mass....	Aug. 15, 1837
Thread, waste, reducing to cotton, wool.....	Ogden Griswold.....	Hartford, Conn....	July 17, 1837
Thread, waste, reducing to cotton, wool.....	William Gray.....	Hebron, Conn....	July 29, 1837
Throstle for spinning.....	Benjamin Brundred...	Patterson, N. J.....	Sept. 9, 1845
Tow line.—See Class 7.			
Twine or small cord, machinery for making.....	Hugh McCubbin.....	Petersburg, Va.....	Aug. 17, 1843
Twine, tarring and spooling.....	Israel Decker.....	Boston, Mass.....	April 3, 1819
Twisting, reeling, and doubling machine.....	H. E. and J. Haight.	New York.....	Aug. 30, 1813
Twisting, self-supplying machine.	Walter Hunt.....	New York.....	June 11, 1829
Wadding, pelisse, improvement in the manufacture of.....	Darius Goff.....	Rahoboth, Mass....	Jan. 15, 1846
Warp, net fabrics.....	G. W. Heard, assignee of J. S. Glover.....	Ipswich, Mass.....	June 27, 1846
Weaver's harness.....	Kassimer Vogel.....	Lowell, Mass.....	Dec. 10, 1846
Weavers' or bowline knots, machinery for tying.....	Peter Moulton.....	New Rochelle, N. Y.	Aug. 24, 1846
Whipper, cotton.....	William Hopkins.....	Plainfield, Conn....	March 6, 1823
Whipper, cotton, and cleaning...	Samuel P. Mason.....	Killingly, Conn....	July 8, 1834
Whipper, cotton, cylindrical grate	James S. Simmons...	Scituate, R. I.....	Oct. 1, 1830
Whipper, cotton, oblique.....	Lucien Osgood.....	Abbingdon P. O., Ct.	Oct. 27, 1835
Whipper, cotton, revolving.....	Elisha Baker.....	Warwick, R. I.....	June 4, 1830
Winding cotton.....	David Brown, jr.....	Warren, R. I.....	Feb. 5, 1807
Winding quills.....	Levi Ruggles.....	Boston, Mass.....	Aug. 16, 1810
Winding quills.....	Francis Jones.....	New York.....	May 23, 1821
Winding slubbing from the card, conical spool.....	Charles Atwood.....	Middletown, Conn..	Nov. 1, 1830
Winding spooling cotton, roving.	William H. Elliott...	Leicester, Mass....	Dec. 28, 1833
Winding, spooling, and weaving.	Eb. Stowell.....	Middlebury, Vt....	Feb. 28, 1815
Winding spools and bobbins.....	Walter Janes.....	Ashford, Conn....	Aug. 30, 1810
Winding spools and bobbins.....	Augustus Sherwood...	Hudson, N. Y.....	Oct. 18, 1814
Winding spools and bobbins.....	Cal. Flag and O. Wright	Boston, Mass.....	June 29, 1816
Winding spool yarn.....	Paul Moody.....	Boston, Mass.....	March 9, 1816
Winder, socket, bobbin.....	John Thorp and Silas Shepperd.....	Taunton, Mass.....	Oct. 14, 1816
Winding, spooling wool from the breaker carding machine.....	Zachariah Allen.....	Providence, R. I....	Sept. 10, 1839
Wool burring.....	Henry Conecklin.....	Poughkeepsie, N. Y.	July 6, 1839
Wool, burring and cleaning.....	Theodore Ely.....	New York.....	May 16, 1845
Wool, cleaning burs from.....	Theodore Ely.....	Poughkeepsie, N. Y.	Sept. 17, 1839
Wool, cleaning burs from, on the skin.....	Lewis S. Miller.....	Rochester, N. Y....	Jan. 31, 1831
Wool cleaning.....	Samuel Couillard, jr.	Boston, Mass.....	Mar. 30, 1833
Wool cleaning.....	Michael S. Simpson...	Boston, Mass.....	July 7, 1835
Wool cleaning.....	J. Wolcott and C. W. Brown.....	Roxbury, Mass....	Oct. 18, 1837
Wool, cleaning burs from.....	Erastus Tracy.....	Poughkeepsie, N. Y.	Dec. 20, 1837
Wool, cleansing from burs, &c., and ginning cotton.....	Milton D. Whipple...	East Douglass, Mass.	Oct. 26, 1840
Wool, combing.....	The New England Company, ass'ee of Whitwell, Bond, and Seaver, assignees of Michael H. Simpson, assign'ee of Samuel Couillard, jr.*.....	Massachusetts.....	July 7, 1835

* Reissued June 16, 1836. July 6, 1839.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN MADE.
Wool, combing, &c., combing and preparing.....	Francis A. Calvert...	Lowell, Mass.....	Oct. 9, 1841
Wool combing, machine for.....	Charles G. Sargent...	Lowell, Mass.....	Oct. 7, 1842
Wool, combing.....	Francis A. Calvert...	New York, N. Y....	Dec. 27, 1843
Wool, combing ^a	George E. Donisthorpe	Bradford, England..	Sept. 11, 1844
Wool, combing.....	Ezra Gould.....	Patterson, N. J.....	Oct. 9, 1844
Wool, composition to start the oil	John Goulding.....	Dedham, Mass.....	Aug. 24, 1837
Wool, cotton, &c., cleaning from burs.	William W. Calvert and Alanson Crane.....	Chelmsford, Mass...	July 16, 1841
Wool and cotton, ginning, burring	Francis A. Calvert...	Lowell, Mass.....	Nov. 25, 1841
Wool, cotton, &c., picking and opening.†	George C. Kellogg and Phineas Gillett.....	New Hartford, Conn.	April 30, 1846
Wool, cotton, cleaning rollers....	Samuel Sawyer.....	Boston, Mass.....	Mar. 30, 1833
Wool or flax, comber.....	William W. Calvert..	Lowell, Mass.....	July 2, 1836
Wool or flax, to brush into teeth‡	George W. Lyman, as- signee of William W. Calvert.....	Boston, Mass.....	Sept. 18, 1835
Wool, hair, &c., forming web with- out spinning.	J. Arnold and G. G. Bishop.....	Norwalk, Conn.....	Oct. 20, 1836
Wool, manufacturing§.....	John Goulding.....	Dedham, Mass.....	Dec. 15, 1836
Wool, manufacturing.....	John Goulding.....	Dedham, Mass.....	April 27, 1837
Wool, manufacturing.....	John Goulding.....	Dedham, Mass.....	July 10, 1837
Wool, manufacturing.....	John Goulding.....	Dedham, Mass.....	Feb. 16, 1839
Wool, manufacturing.....	John Goulding.....	Dedham, Mass.....	Feb. 16, 1839
Wool, manufacturing.....	John Goulding.....	Dedham, Mass.....	June 11, 1839
Wool, manufacturing.....	John Goulding.....	Dedham, Mass.....	July 21, 1839
Wool, picking, and separating burs	Francis A. Calvert...	New York, N. Y....	June 3, 1843
Wool, preparing for worsted.....	Joseph Banford.....	Philadelphia, Pa....	Mar. 18, 1813
Wool, washing, on the sheep.....	Charles Harris.....	Snowhill, Ohio.....	Oct. 1, 1830
Wringing dyes from cloth.....	William Nelson.....	Batavia, N. Y.....	Nov. 13, 1836
Yarn, cotton, without the aid of twist.....	Erastus Wolcott.....	Newport, N. Y.....	Dec. 11, 1831
Yarn, drawing, and forming into readies.....	Robert Graves.....	Boston, Mass.....	Nov. 22, 1836
Yarn drawing, frame for regulating	Jos. Pray and C. Staf- ford.....	East Killingly, Conn.	Nov. 12, 1846
Yarn, dressing, preparatory to weaving.....	Samuel Batchelder...	Saco, Maine.....	June 22, 1833
Yarn doubling, twisting and reeling	George Levan.....	Gap, Pa.....	July 20, 1846
Yarn, equalizing the strain upon..	Robert Graves.....	Boston, Mass.....	Nov. 22, 1836
Yarn, preparing for weaving.....	H. P. Franklin and W. B. Windsor.....	Providence, R. I....	Aug. 8, 1817
Yarn, rolls, forming on the shuttle, bobbin.....	John Thorpe.....	Providence, R. I....	Nov. 20, 1819
Yarn, sizing, by steam.....	Hannibal Fletcher....	Shelburne, Vt.....	July 8, 1843
Yarn, tarring.....	John Thursby.....	Rushwick, N. Y.,...	May 2, 1843
Yarn, washing and cleaning.....	Sands Olcott.....	Philadelphia, Pa....	April 11, 1846
Yarn, woollen.....	William B. Walker...	Hillsborough Bridge, N. H.....	July 1, 1836

* Eng. pat. Nov. 25, '43. † Antedated October 30, '39. ‡ Reissued Sept. 9, '43. § Reissued July 30, '38.

CLASS No. IV.

CHEMICAL PROCESSES,

**Manufactures, and Compounds, including Medicine, Dying,
Color-making, Distilling, Soap and Candle
making, Mortars, Cements, &c.**

LIST OF PATENTS.

CLASS IV.—CHEMICAL PROCESSES, *Manufactures, and Compounds, including Medicines Dying, Color-making, Distilling, Soap and Candle making, Mortars, Cements, &c.*

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Acid margaric, stearic, and oleic, decomposed by caustic lime.	Henry Seybert & Lardner Vanuxem.....	Philadelphia, Pa....	Aug. 16, 1830
Acid, mixing, for dying woollens.	Hugh Young.....	Rochester, N. Y....	Nov. 19, 1833
Acid, mode of separating the oleic from the stearic.....	James S. Gwynne....	Pittsburg, Pa.....	Sept. 3, 1846
Acid, sulphuric, manufacturing....	James Hargreaves....	Patterson, N. J.....	Aug. 24, 1839
Acid, sulphuric.....	Benjamin Bell.....	Boston, Mass.....	Nov. 7, 1811
Acid, vegetable.....	Nath'l S. Allison and Benjamin Kugler...	Philadelphia, Pa....	June 5, 1832
Ague and fever specific.....	Morris Cannon.....	New Orleans, La....	Oct. 1, 1830
Alcohol, carbonated, substitute for lamp oil.....	Samuel Casey.....	Lebanon, Maine....	Mar. 17, 1834
Alcohol, extracting from apples..	Anson Wolcott.....	E. Bloomfield, N. Y.	Oct. 6, 1835
Alcohol, extracting by steam....	A. and N. Wolcott....	Bloomfield, N. Y....	Mar. 19, 1827
Alcohol, or spirits, from grain...	Isaiah Jennings.....	New York.....	June 13, 1831
Alcohol, used in stiffening hats, extracted by the process of distillation.....	William McCay.....	Northumberland, Pa.	June 22, 1832
Alkali, extracting from ashes in the manufacture of potass.....	Jacob Osborn.....	Elyria, Ohio.....	July 18, 1840
Alkali, extracting from marine salt and kelp.....	John Nazro.....	Massachusetts.....	Jan. 6, 1797
Alum, from lignite.....	Genet Troost.....	Philadelphia, Pa....	Mar. 3, 1817
Alembic, vaporous.....	Charles Merot.....	Philadelphia, Pa....	Nov. 5, 1818
Anodyne, and alterative syrup...	Rezin Thompson.....	Rome, N. Y.....	Nov. 14, 1835
Anti-bilious, grand depurative purifier.....	John J. Giraud.....	Baltimore, Md.....	Sept. 9, 1817
Asiatic lenitive for pain.....	Ez. Alder.....	New York.....	Oct. 26, 1818
Bagasse, drying.....	Wm. White, ass'ee of George Merrick....	New Orleans, La....	April 10, 1845
Balloon.....	Moses McFarland....	Massachusetts.....	Oct. 28, 1799
Balsam lavender.....	Elizabeth Bartlette...	New York.....	Jan. 29, 1833
Barilla, manufacturing from tobacco stems.....	George Easterly.....	Richmond, Va.....	Feb. 5, 1810
Bark, evaporating the extract of..	George W. Klein.....	Boston, Mass.....	Dec. 15, 1838
Bark, extracting.....	Samuel Downing....	New York.....	June 12, 1801
Bark, extracting, essence of.....	Samuel Downing....	New Jersey.....	April 19, 1802
Bark, extracting, from dying.....	Thomas Bedwell and Wm. Mitchell.....	Pennsylvania.....	June 7, 1803
Bark, extract of.....	Wm. G. Fessenden..	Walpole, N. H.....	Oct. 20, 1812
Bark, hemlock, extract of, for tanning.....	Thomas Rundlet.....	Bedford, N. H.....	Dec. 30, 1833
Bark, preparation.....	Thomas Benger.....	Pennsylvania.....	Jan. 25, 1804
Bark, preparation, quercitron....	Nathan Harper.....	Frankfort, Pa.....	Oct. 30, 1810
Bark, preparation, quercitron....	James Andrews.....	Philadelphia, Pa....	July 15, 1816
Bark, preparation, quercitron....	James Elliott.....	Philadelphia, Pa....	Aug. 20, 1822
Bark.—See <i>Tanning, Class 16.</i>			
Beef, salted, mode of making and curing.....	Wm. A. Tomlinson..	New York.....	Dec. 24, 1830
Beer or ale, restoring sour or musty	Moses Granger.....	Lowville, N. Y....	Jan. 11, 1832
Beer, composition for making....	Stephen Hinds.....	Montrose, Pa.....	May 11, 1831
Beer, making spruce.....	John Williams.....	Cambridge, Mass....	Feb. 17, 1820

* Antedated Sept. 16, 1844.

INVENTIONS OR DISCOVERIES.	PATENTRES.	RESIDENCE.	WHEN ISSUED.
Beer, making spruce.....	George Jones.....	Boston, Mass.....	Jan. 27, 1832
Beer, vegetable.....	Simson Whiton.....	Hartford, Ct.....	Mar. 21, 1846
Bitters, jaundice.....	Jesse Wheaton.....	Massachusetts.....	June 17, 1801
Bitterings, from salt kettles, process of separating.....	David Dear.....	Salina, N. Y.....	Oct. 18, 1837
Blacking.....	P. H. Havill and D. Currarr.....	Roscoe, Ohio.....	June 24, 1843
Blacking, for leather.....	Samuel Adams.....	Cleveland, Ohio.....	May 30, 1842
Bleaching.....	George Keintzle.....	Montgomery co., Pa.....	Oct. 8, 1818
Bleaching apparatus.....	Moses Pierce.....	Norwich, Ct.....	Nov. 8, 1845
Bleaching bay-berry wax.....	Benjamin Gomperts.....	New York.....	Feb. 14, 1832
Bleaching bees wax, yellow.....	John N. Shultz.....	New York.....	April 30, 1832
Bleaching cloth, and cleaning.....	Calvin H. Farnham.....	Norwich, Ct.....	Aug. 15, 1835
Bleaching cotton by steam.....	A. Milne and Daniel S. Deane.....	Clinton, N. Y.....	July 14, 1813
Bleaching cotton and linen yarn..	Jonas Kendall.....	Leominster, Mass.....	Aug. 22, 1817
Bleaching cotton and linen.....	John B. Green.....	Portsmouth, N. H.....	May 29, 1832
Bleaching cotton and linen.....	Lemuel W. Wright.....	Now in England.....	Mar. 3, 1838
Bleaching hemp and flax, unrotted	William Cumberland.....	New York.....	Aug. 27, 1822
Bleaching paper.....	J. G. & J. H. Kendall.....	Leominster, Mass.....	July 2, 1846
Blister plaster.....	Elisha Perkins.....	Baltimore, Md.....	Jan. 15, 1830
Blood, equalizing the.....	S. R. Terrell.....	Burton, Miss.....	Feb. 5, 1836
Blood, purifying, for clarifying sugar.....	Thomas Hewitt.....	Philadelphia, Pa.....	Nov. 19, 1833
Blow pipes, hydro-oxygen.....	Robert Hare, M. D.....	Philadelphia, Pa.....	July 5, 1845
Boiler, stone, for chemical purposes	Abm. H. Quincy.....	Boston, Mass.....	June 13, 1812
Boiling liquids of all kinds.....	Richard M. Beach.....	Franklin, N. Y.....	April 7, 1831
Brandy, imitating, from domestic materials.....	Henry Moore.....	Aurora, N. Y.....	July 2, 1814
Brandy, manufacturing all kinds of grain.....	Chris. H. Hutter.....	Pennsylvania.....	Feb. 11, 1803
Brewing.....	Arthur Redmond.....	Nashville, Tenn.....	May 20, 1819
Brewing apparatus.....	R. L. Lloyd and A. Bartenheimer.....	Philadelphia, Pa.....	Jan. 27, 1824
Brewing beer.....	Thomas Behan.....	Norwich, N. Y.....	Aug. 1, 1838
Brewing from Indian corn.....	Alexander Anderson.....	Pennsylvania.....	Jan. 26, 1801
Brewing spruce beer.....	William Dezeau.....	Philadelphia, Pa.....	June 13, 1815
Brewing by steam.....	Harvey Hackley.....	New York.....	April 21, 1820
Camphor, refining.....	Henry Mead.....	New Haven, Ct.....	Feb. 12, 1810
Camphor, refining.....	Job Green.....	Charlestown, Mass.....	April 27, 1812
Candles.....	Joseph S. Sampson.....	Boston, Mass.....	Aug. 6, 1790
Candles.....	Richard Robotham.....	New York.....	June 2, 1794
Candles.....	Joseph S. Sampson.....	Massachusetts.....	June 26, 1797
Candles.....	Francis Fuller.....	New York.....	Sept. 29, 1821
Candles.....	James M. Yard.....	Trenton, N. J.....	Dec. 4, 1821
Candles, composition for.....	Philip Farrell.....	New York.....	Dec. 16, 1833
Candles, dipping.....	Samuel Blydenburg.....	Connecticut.....	Mar. 22, 1798
Candles, dipping.....	William Miller.....	New York.....	Jan. 6, 1809
Candles, dipping.....	Samuel Stansbury.....	New York.....	Jan. 6, 1809
Candles, dipping.....	John Aborn.....	Burlington, N. J.....	Mar. 20, 1821
Candles, dipping.....	William Day.....	Gardiner, Me.....	Mar. 11, 1826
Candles, dipping.....	Thomas M. Scott.....	Falls township, Pa.....	April 1, 1830
Candles, dipping machine.....	John Aborn.....	Trenton, N. J.....	May 19, 1832
Candles, dipping and moulding...	James Zwiesler.....	New York.....	July 1, 1814
Candles, manufacture of, from castor oil.....	Ebenezer Marsh.....	Alton, Ill.....	April 30, 1842
Candles, moulds for, manufac'e of	John Drummond.....	New York, N. Y.....	Feb. 20, 1846
Candles, moulding.....	James Gamble & Jos. S. Hill.....	Cincinnati, Ohio.....	Dec. 30, 1841
Candles, moulds.....	Thomas Hewitt, jr.....	Philadelphia, Pa.....	May 4, 1831
Candles, moulds.....	Thomas Hewitt, jr.....	Philadelphia, Pa.....	June 13, 1831
Candles, moulds.....	T. J. Dyre and Anthony Richmond.....	New Bedford, Mass.....	July 20, 1831
Candles, moulds.....	Jefferson Dunlap.....	New Holland, Pa.....	Mar. 8, 1836

* Antedated Jan. 2, 1846.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Candles, moulding	D. M. Randolph.....	Richmond, Va.....	Aug. 1, 1815
Candles, moulding.....	J. Moore and S. P. Power.....	Strasburg, Pa.....	Mar. 3, 1837
Candles, moulding.....	Joseph H. Tuck.....	Nantucket, Mass....	July 11, 1837
Candles, moulding, sperm.....	William W. Swain....	New Bedford, Mass..	Jan. 14, 1820
Candles, separating stearin from elain.....	John H. Smith.....	Brooklyn, N. Y....	April 1, 1843
Candles, tallow and wax.....	James Zwiesler.....	Baltimore, Md.....	April 2, 1812
Candle wick, dipping and cutting.	Willard Morey.....	Worcester, Mass....	Aug. 15, 1835
Candle wick.—See Class 3.			
Cane juice, clarifying.....	Wm. J. McIntosh....	Georgia.....	Mar. 7, 1828
Caoutchouc, application to cloths.	E. M. Chaffee.....	Roxbury, Mass....	Aug. 31, 1836
Caoutchouc, covering ropes with*	Patrick Mackie.....	New York.....	Oct. 16, 1834
Caoutchouc, dissolving.....	Patrick Mackie.....	New York city.....	Mar. 23, 1836
Caoutchouc, divesting of its adhesive properties.....	Charles Goodyear....	New York.....	June 17, 1837
Caoutchouc, fluid, to render articles water proof.....	George H. Richards..	Washington, D. C..	April 11, 1831
Caoutchouc, spreading and drying upon cloths.....	William Atkinson....	New York.....	Oct. 6, 1835
Caoutchouc, manufacturing balls of.	Chas. B. Rodgers & E. Arnold, ass'ees of E. M. Chaffee.....	Charlestown, Mass } Cambridge ^t , Mas }	Jan. 21, 1841
Caoutchouc, manufacturing various articles, preparing with sulphur.	C. Goodyear, ass'ee of N. Haywood.....	Boston, Mass.....	Feb. 24, 1839
Calcareous earths, concentration..	John Fowler.....	Pennsylvania.....	Nov. 16, 1797
Catholicon, chemical.....	Isaac W. Smith.....	Lockport, N. Y....	May 28, 1830
Ceiling, fire-proof.....	Benjamin J. Harris ..	Richmond, Va.....	May 17, 1814
Cement, artificial stone, &c., forming.	John Danforth Greenwood and Richard Wynn Keene.....	England.....	Oct. 9, 1839
Cement, bituminous.....	Cyprien Poullalier....	New York.....	March 3, 1838
Cement, for blocks, pillars.....	Charles Clinton.....	Minneapolis, N. Y..	Oct. 28, 1835
Cement, for cisterns.....	Carson and Robert....	New York.....	Oct. 17, 1835
Cement, for cisterns.....	Thomas Coyle.....	Baltimore, Md.....	Aug. 16, 1837
Cement, chemical, water proof..	Charles Fletcher.....	Boston, Mass.....	Nov. 18, 1831
Cement, for coffins.—See Class 22.			
Cement, compound, resinous.....	Daniel A. Balcom....	Northampton, Mass.	Aug. 1, 1834
Cement, for covering buildings...	Jacob Bump.....	Kirtland, Ohio.....	Sept. 3, 1840
Cement, fire proof.....	Henry Hemen.....	Mifflin t'nship, Pa..	May 10, 1824
Cement, fire proof, and water...	James Coburn.....	Middlesex co., Mass.	Sept. 3, 1828
Cement, gum elastic.....	Charles Goodyear....	New Haven, Conn..	Sept. 9, 1835
Cement, hardening manufactures of, and rendering impervious to water.....	Samuel Goodwin.....	New York, N. Y....	April 16, 1841
Cement, hydraulic.....	Thomas F. Purcell and Alex B. McFarlin....	Williamsport, Pa...	Dec. 30, 1833
Cement, hydraulic.....	Parker, Clowes, and Garfield.....	New York.....	Aug. 27, 1835
Cement, hydraulic.....	Obadiah Parker.....	New York.....	Sept. 9, 1835
Cement, hydraulic.....	Levi Kidder.....	New York city.....	Jan. 15, 1836
Cement, hydraulic.....	John White.....	Syracuse, N. Y....	Jan. 23, 1836
Cement, hydraulic, from basanite.	Ebenezer C. Warner..	Albany, N. Y.....	Oct. 6, 1837
Cement, marble, imitation of.....	Benjamin Trembly....	New York.....	Nov. 13, 1827
Cements, making.....	William H. Smith.....	Georgetown, D. C..	June 10, 1844
Cements, mastic.....	William H. Chase.....	Pensacola, Florida..	April 16, 1845
Cements & pigments, water proof †	Edward Deutsch.....	France.....	May 25, 1844
Cements for preparing masts†	Alfred Jeffrey.....	Great Britain.....	April 15, 1842
Cement, for roofs of houses.....	David Stodder.....	Massachusetts.....	Nov. 16, 1804
Cement, for roofs of houses.....	Charles Morneweck....	Baltimore, Md.....	Mar. 13, 1809
Cement, for roofs of houses.....	Charles Clinton.....	New York.....	July 13, 1837
Cement, threefold.....	Ezra Godfrey.....	New York.....	Sept. 9, 1825

* Renewed Dec. 3, 1834.

† Date of English patent Oct. 8, 1842.

‡ Date of English patent April 6, 1843.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Cement, for walls, ceilings, and floors.....	A. Scott.....	Newburg, N. C.....	Aug. 15, 1814
Cement, for water.....	John Grant.....	Saratoga, N. Y.....	Nov. 11, 1817
Cement, water proof.....	Canvas White.....	Whitestown, N. Y.....	Feb. 1, 1820
Cement, water proof.....	Canvas White.....	Whitestown, N. Y.....	Feb. 17, 1821
Cement, water proof.....	David M. Randolph.....	Richmond, Va.....	Sept. 26, 1821
Cement, water.....	Simeon Guilford.....	Lebanon, Pa.....	Jan. 11, 1826
Cement, water.....	Simeon Guilford.....	Washington, D. C.....	Jan. 16, 1827
Cement, water proof.....	William Y. Singleton.....	Springfield, Ill.....	Dec. 26, 1845
Cement, water, paint, or varnish.....	John T. Howe.....	New York.....	Jan. 31, 1829
Cement, wood, brick, stone, or iron work.....	Richard Walsh.....	Boston, Mass.....	Jan. 5, 1832
Charcoal manufacturing.....	A. Kurtz.....	Philadelphia, Pa.....	June 28, 1816
Charring wood for procuring gasses.....	Samuel J. Jones.....	Philadelphia, Pa.....	Jan. 17, 1827
Chlorine, cosmetic.....	David West.....	Hudson, N. Y.....	Aug. 26, 1818
Chrome yellow, making.....	Richard A. Tilghman.....	Philadelphia, Pa.....	Jan. 11, 1833
Crystallizing tin.....	George F. Valentine.....	Albany, N. Y.....	Jan. 16, 1843
Cigars, self-igniting.....	John March.....	New York.....	April 16, 1834
Coloring and hardening wood.....	Charles F. Spicker.....	New York.....	June 24, 1844
Colors for coaches.....	William Hollenstein.....	Pennsylvania.....	April 10, 1840
Color, for painting.....	Lawrence Allurne.....	Pennsylvania.....	Feb. 24, 1797
Color, for painting.....	Frs. Guy.....	Philadelphia, Pa.....	Dec. 30, 1803
Color, permanent, for calicoes.....	Aug. Boulia.....	Philadelphia, Pa.....	Dec. 24, 1814
Color, preparation, of green.....	Baron A. De Carren-deffez.....	New York.....	Oct. 12, 1807
Color, preparation, with lime.....	Jonathan Nichols, jr.....	Broad Albin, N. Y.....	April 12, 1815
Color, substitute for indigo.....	Samuel De Riemer.....	Poughkeepsie, N. Y.....	May 15, 1809
Color, yellow.....	Thomas Bedwell.....	Pennsylvania.....	April 20, 1796
Coloring hats.—See Class 3.			
Coloring matter, manufacture of*.....	Henry Stevens.....	Great Britain, Engl'd.....	Oct. 28, 1837
Composition for aqueduct pipes.....	Gideon Myers.....	Bridgewater, N. Y.....	Mar. 28, 1844
Composition, for axletrees.....	Aaron Nash.....		Dec. 17, 1814
Composition for bearings of machinery.....	I. S. Hill, and Joseph Dixon.....	Boston, { Mass .. Taunton, }	Jan. 31, 1845
Composition for bleaching leather.....	Joseph Hayward.....	Cleveland, Ohio.....	May 9, 1846
Composition for burning in lamps.....	Isaiah Jennings.....	New York, N. Y.....	Dec. 31, 1839
Composition, coating metallic surfaces to prevent oxidation.....	Arthur Wall.....	Shadwell, England.....	June 22, 1842
Composition, for copy writing and drawing books.....	Richard Wall.....	Philadelphia, Pa.....	April 28, 1819
Composition, covering the bottom of vessels.....	Samuel Williams.....	New York, N. Y.....	Mar. 18, 1842
Composition, covering houses.....	Abijah Rogers.....	Hudson, N. Y.....	Mar. 14, 1817
Composition, cure for cancers.....	Elias Willard.....	Albany, N. Y.....	Oct. 8, 1810
Composition for dressing leather, to render water-proof.....	William A. Roland and Henry Miller.....	Rowan county, N. C.....	Jan. 24, 1849
Composition, for dyeing the hair.....	Auguste Grandjean.....	New York.....	Feb. 28, 1844
Composition, for flooring houses.....	Richard Robotham.....	Vermont.....	April 12, 1794
Composition, for flooring houses.....	Louis De Niroth.....	Baltimore, Md.....	Feb. 3, 1807
Composition for glazing.....	Thomas and Ephraim Parker.....	Orangeville, Pa.....	Feb. 20, 1844
Composition for the hair.....	James Mackay.....	Great Britain.....	April 6, 1842
Composition for making brick.....	Nathaniel J. Wyeth.....	Cambridge, Mass.....	Mar. 28, 1844
Composition for making fringe and tassal moulds.....	Charles Branwhite.....	New York, N. Y.....	Jan. 23, 1846
Composition, for making hats.....	Frederick Messer.....	Guildhall, Conn.....	Jan. 23, 1812
Composition, of marble, granite.....	Louis Matthey.....	Brooklyn, N. Y.....	Mar. 7, 1827
Composition, matter, for fire brick.....	Christopher W. Fenton.....	Bennington, Vt.....	Sept. 22, 1837
Composition, for medical purposes.....	Robert S. Bernard.....	Norfolk, Va.....	Aug. 17, 1835
Composition, mending china.....	Harvey Bascom.....	Weston, Mass.....	June 10, 1811
Composition, pencils.....	Jos. Ellis.....	Dedham, Mass.....	April 26, 1819
Composition, pencils, black lead for.....	Charles Osgood.....	Salem, Mass.....	Feb. 26, 1814
Composition, pencils, points.....	Guy C. Baldwin.....	Ticonderoga, N. Y.....	Dec. 2, 1835

* Renewed April 21, 1838.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHERE ISSUED.
Composition, pharmaceutic.	John C. Bay.....	Mount Pleasant, O..	Jan. 26, 1896.
Composition, plaster, or fire proof cement.	Wm. Bates and Dennis Dolan.....	Manchester, G. B...	Mar. 14, 1846
Composition, preparation for the hair.....	Vair Clirehugh.....	New York, N. Y...	April 11, 1842
Composition, for preserving leather	T. P. Merriam.....	New Bedford, Mass.	Nov. 4, 1842
Composition, preserving wood and brick.....	Cyrus Constant.....	New York.....	Feb. 1, 1800
Composition, preserving shingles.	Foster Henshaw.....	Brookfield, Mass...	Jan. 16, 1834
Composition, to prevent absorption of animal and fish oils...	Nathan Hathaway...	Fairhaven, Mass....	May 22, 1835
Composition, preserving ropes and cordage.....	Amos Sailsbury.....	Troy, N. Y.....	Nov. 1, 1830
Composition, protecting metallic sheathing of vessels.....	Edward M. Robinson.	New Bedford, Mass.	Aug. 8, 1837
Composition, for razor straps....	David Ritter.....	New Haven, Conn..	Mar. 9, 1822
Composition for removing grease from cloth.....	Solomon Guess.....	Boston, Mass.....	Aug. 26, 1845
Composition, rendering cloth water proof.....	Nathaniel Hatch....	Eastport, Maine....	Mar. 23, 1842
Composition, rendering leather water proof.....	Charles F. Miller....	Baltimore, Md.....	Aug. 28, 1840
Composition, for scurvy.....	James U. Armour....	Fredericktown, Md.	Sept. 28, 1827
Composition, for softening cast or crude iron.	Abel Scott and Alonzo Selden.....	Winchester, N. H...	Nov. 8, 1814
Composition, for stiffening hats..	Char. Bent and F. Bush	Chelmsford, Mass...	Nov. 3, 1831
Composition, for stiffening hats..	Laban L. Macomber.	Gardiner, Maine....	Jan. 19, 1831
Composition, substitute for jostic.	Frederick Eckstein and James McIlhenny...	Philadelphia, Pa....	Oct. 12, 1814
Composition, supplying lamps...	Henry Porter.....	Bangor, Maine.....	April 8, 1835-
Composition, for taking off the glaze of mill stones.....	John Noble.....	Derby, Conn.....	June 10, 1813
Composition, for tables.....	A. B. Allen.....	.....	May 10, 1844
Composition, for teeth.....	Thomas White.....	St. Clairsville, Ohio	July 29, 1839
Composition, for vessels' bottoms	Jonathan Pratt.....	Middletown, Conn..	Jan. 14, 1809
Composition, for vessels' bottoms	William Russell, jr...	New Bedford, Mass.	Nov. 8, 1819
Composition, for vessels' bottoms	James Russell.....	New Bedford, Mass.	Jan. 29, 1820
Composition, water and fire proof, for roofs.....	David Greer.....	Pittsburg, Pa.....	April 25, 1828
Composition, water proof, for boots	Patrick G. Nagle.....	Philadelphia, Pa....	Feb. 10, 1837
Composition, water proof, for leather.....	Joseph Board.....	New York.....	Nov. 4, 1813
Composition, water proof, for roofs	Lyman Garfield.....	Troy, N. Y.....	Feb. 20, 1835
Composition, water proof, for woolen cloths.....	James P. Wightman..	Boston, Mass.....	Oct. 21, 1806
Composition, water-proof, for leather.....	William J. Roome...	New York.....	Jan. 6, 1844
Composition, water-proof.....	Charles Lyon.....	New York, N. Y...	Sept. 23, 1842
Compound explosive power to propel machinery.....	Henry Rogers.....	New York.....	June 29, 1833
Condenser.....	Lyman Cooke.....	Whitestown, N. Y.	Mar. 26, 1811
Condenser, and heater, for manufacturing spirituous liquor....	Thomas Shurley.....	N. Madison c.h., Va.	Nov. 18, 1814
Condenser, for stills.....	James Root.....	Painesville, Ohio...	May 26, 1834
Condensing box for wooden still..	Rufus W. Adams....	Marlborough, Vt...	Mar. 27, 1812
Condensing tub.....	Alexander Anderson.	Philadelphia, Pa....	Oct. 27, 1813
Condensing tub, (improvement on Anderson's).....	Henry Witmer.....	Lancaster, Pa.....	May 17, 1805
Condensing vapours in distillation	Noel Blanche.....	New York.....	Mar. 2, 1811
Confectionary, applying syrup by steam.	Robert L. Stuart and Alex'r Stuart.....	New York.....	Mar. 7, 1833
Consumption, &c., curing.....	Charity S. Long.....	Philadelphia, Pa....	May 27, 1812
Copper, acetate of.....	Stephen Dempsey....	New York.....	Feb. 4, 1813
Coppers, making.....	Isaac Tyson.....	Baltimore, Md.....	Feb. 15, 1827

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN GRANTED.
Cordial, anti-bilious	Simon Lazarus	Virginia	Dec. 21, 1802
Cordial, bilious	Samuel Chamberlain	Massachusetts	Dec. 31, 1804
Cordial, gin	Antoine Boucherie	Philadelphia, Pa.	Jan. 31, 1809
Cotton seed, for food, preparing ..	Daniel Gillett	Springfield, Mass.	Sept. 15, 1819
Cough drops	Daniel E. Smith	Cornwall, Conn.	June 30, 1826
Cream of tartar, carbonated, liquid	Sophia Usher	New York	Sept. 11, 1819
Dead bodies, preserving.— <i>See Class</i>	22.		
Dentrifice, vegetable	Elijah H. Reid	Clarksville, Ga.	Mar. 1, 1834
Distilling	Aaron Putnam	Medford, Mass.	Jan. 29, 1791
Distilling	Nathan Read	Salem, Mass.	Aug. 26, 1791
Distilling	Jos. Simpson	Richmond, Va.	Mar. 4, 1794
Distilling	Eli Barnum and Benjamin Brooks	New Marlboro', Mass.	July, 13, 1808
Distilling	John Diamond	Philadelphia, Pa.	Dec. 28, 1808
Distilling	Michael Garber, sen.	Staunton, Va.	July 13, 1810
Distilling	Jac. Miller	Lancaster co., Pa.	Mar. 2, 1811
Distilling	Andrew Dunlop	Boston, Mass.	May 3, 1811
Distilling	John J. Giraud	Baltimore, Md.	June 14, 1811
Distilling	Omri Carrier	Enfield, Conn.	Nov. 2, 1812
Distilling	John Bates	Hartford, Conn.	Jan. 26, 1813
Distilling	John W. Alber	Pennsborough, Pa.	April 19, 1814
Distilling	Wm. M. B. Wollies & Hiram P. Barlow	Oneida county, N.Y.	May 6, 1814
Distilling	Naphtali Hart	Easton, Pa.	Oct. 29, 1814
Distilling	William Richardson	Kingston, N. Y.	June 15, 1816
Distilling	Ezra Talmage	Lancaster, Ky.	July 8, 1816
Distilling	Pierce Woods	Frederick co., Md.	Sept. 29, 1818
Distilling	James Case	New York	Mar. 18, 1819
Distilling	David Cutler	Leonard co., Ohio	Feb. 20, 1821
Distilling	Robert Blaikie	New York	April 27, 1821
Distilling	Philip Griemer	Brandywine, Pa.	April 17, 1822
Distilling	Fred. S. Cozens	New York	July 27, 1822
Distilling	Malcolm McDonald	Fayette co., Pa.	Feb. 19, 1823
Distilling	J. Carpenter & J. Roe	New York	Jan. 29, 1824
Distilling	J. M. Aiken	Philadelphia, Pa.	Aug. 30, 1827
Distilling	Abraham Whitson	Staunton, Va.	Sept. 28, 1825
Distilling	Samuel Harwood, 3d.	Braintree, N. Y.	April 15, 1826
Distilling	William J. Cocke	Surrey co., Va.	Oct. 30, 1827
Distilling	James Luak	Butler co., Ohio	Dec. 22, 1827
Distilling	William J. Cocke	Cabin Point, Va.	Feb. 4, 1828
Distilling	T. Lawes & P. Grosjean	Louisville, Ky.	July 30, 1828
Distilling	James R. Nance	Floyd, Ind.	Dec. 27, 1828
Distilling	William Cooke	Southport, N. Y.	Dec. 7, 1829
Distilling	Charles F. Fisher	York, Pa.	April 24, 1830
Distilling	Thomas Gallaher	Liverpool, Pa.	Dec. 14, 1830
Distilling	John Cairou	New York	Jan. 10, 1831
Distilling	James K. Jencks	Sackett's Har. N. Y.	May 2, 1831
Distilling	Lemuel W. Wright	London, England	Sept. 28, 1831
Distilling	Jacob Miller	Lancaster, Pa.	Feb. 16, 1832
Distilling	Lewis Johnston	Easton, Pa.	Nov. 9, 1832
Distilling	Peter Swartz, jr.	Muncey, Pa.	June 25, 1836
Distilling	A. R. Keer & H. Hoover	Waynesborough, Pa.	July 1, 1836
Distilling alcohol	Lemuel J. Kilburn and John Biddis	New York	June 4, 1803
Distilling alcohol	John Wright	New York	Oct. 22, 1834
Distilling alcohol	John T. Heard	Boston, Mass.	Sept. 9, 1843
Distilling all kinds of liquors	Norman & A. Walcott	Bloomfield, N. Y.	Dec. 8, 1836
Distilling alcohol from whiskey	Augustus V. H. Webb	New York	Aug. 28, 1841
Distilling apparatus	Abm. Hiestand	Yorktown, Pa.	Nov. 27, 1805
Distilling apparatus	Abm. Weaver	Adams co., Pa.	April 23, 1807
Distilling apparatus	Antoine Boucherie	Adams co., Pa.	Jan. 30, 1809
Distilling apparatus	William Chamberlain	Vermont	Mar. 17, 1810
Distilling apparatus	Augustus Tobey	Alford, Mass.	June 21, 1810
Distilling apparatus	William Gamble	Washington, D. C.	April 18, 1811

* Retained Aug. 22, 1831

Retained Feb. 20, 1836.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Distilling apparatus.....	Jac. Sherer and Abm Killian.....	Lancaster, Pa.....	June 17, 1811
Distilling apparatus.....	Lewis Leceane.....	Belleville, N. J.....	Dec. 4, 1811
Distilling apparatus.....	Isaac Hoffman.....	Shawangunk, N. Y.....	Dec. 31, 1813
Distilling apparatus.....	Naman Goodsell.....	Paris, N. Y.....	June 13, 1816
Distilling apparatus.....	Amos Blood.....	Boston, Mass.....	July 16, 1816
Distilling apparatus.....	Henry Field.....	Camillus, N. Y.....	June 17, 1819
Distilling apparatus.....	Fred. Kalisky.....	Philadelphia, Pa.....	Dec. 14, 1819
Distilling apparatus.....	Henry F. Fisher.....	Philadelphia, Pa.....	Sept. 12, 1821
Distilling apparatus.....	Uriah Sweetland.....	Kingston, Pa.....	Nov. 18, 1822
Distilling apparatus.....	John C. Douglass.....	Troy, N. Y.....	Nov. 26, 1825
Distilling apparatus.....	Charles Otis.....	Tunkhannock, Pa.....	Feb. 16, 1831
Distilling apparatus.....	Simeon De Witt.....	Albany, N. Y.....	Jan. 30, 1833
Distilling apparatus.....	Joseph T. Dwyer.....	Nashville, Tenn.....	Nov. 19, 1833
Distilling apparatus.....	Joseph T. Dwyer.....	Nashville, Tenn.....	Oct. 14, 1834
Distilling apparatus for spirits of turpentine.....	Isaiah Jennings.....	New York.....	Aug. 27, 1835
Distilling, art of.....	Samuel Oliver.....	Northampton, Pa.....	Aug. 4, 1841
Distilling boiling, method of, applicable to.....	Benjamin Eggleston, jr.....	Princeton, N. J.....	May 27, 1805
Distilling boiler, double.....	Enos Gunn.....	New Haven, Conn.....	Dec. 19, 1808
Distilling boiler, and rectifying still.....	William Eaton.....	Baltimore, Md.....	Oct. 29, 1810
Distilling boiler, for steam still.....	William Thornton.....	Delaware.....	Oct. 28, 1803
Distilling and boiling liquors.....	John Morris.....	New Haven, Ct.....	Mar. 13, 1813
Distilling in cast iron stills.....	Jos. Coppinger.....	Beaufort, N. C.....	Nov. 21, 1809
Distilling cold.....	A. V. H. Webb.....	Utica, N. Y.....	May 14, 1836
Distilling, cooling the mash used in the process of.....	Allen D. Ward.....	Minerva, Ky.....	Nov. 7, 1840
Distilling, or compound distillation.....	Fitch Hall.....	New York.....	April 17, 1797
Distilling condenser.....	Alexander Anderson.....	Pennsylvania.....	Jan. 26, 1801
Distilling cordials.....	Lewis C. and Philip Bodman.....	Baltimore, Md.....	Sept. 30, 1825
Distilling, cylindrical heater.....	Charles Jenks & Abel Pease.....	East Windsor, Ct.....	July 12, 1813
Distilling, and evaporation.....	Alexander Matthews.....	Island Cr'k town'p, O.....	June 13, 1831
Distilling, and evaporation.....	Benjamin Henfrey.....	Pennsylvania.....	Mar. 2, 1801
Distilling, and generating steam.....	Enos Brown.....	Oneida co., N. Y.....	Jan. 23, 1815
Distilling, from grain.....	Simeon Shirteff.....	Oneida co., N. Y.....	July 5, 1814
Distilling, from grain, by steam.....	David Dewey.....	Sullivan, N. Y.....	July 5, 1814
Distilling, heating liquor.....	Thomas Belden.....	Hartford, Conn.....	Aug. 18, 1813
Distilling machinery.....	Daniel Jackson.....	Peru, N. Y.....	Dec. 28, 1824
Distilling maize.....	Anthony Doolittle.....	Ann Arbour, M. T.....	Nov. 10, 1829
Distilling mash, cooling for.....	Thomas Whitemell.....	Scotland Neck, N. C.....	Sept. 2, 1815
Distilling oil, essential and spirits.....	David Jewett.....	Pittsfield, Mass.....	Jan. 24, 1811
Distilling, rectifying.....	John Whips.....	Jefferson co., Ky.....	April 22, 1816
Distilling salt water.—See Caboses, Class 5.			
Distilling spirits.....	Daniel Hsley.....	Massachusetts.....	May 14, 1803
Distilling spirits.....	Jacob Hugus.....	Hempfield t'wn'p, Pa.....	May 17, 1828
Distilling spirits from corn stalks.....	Burgess Allison.....	Philadelphia, Pa.....	July 6, 1809
Distilling spirits from corn stalks.....	John Saunders.....	Schenectady, N. Y.....	Fed. 7, 1811
Distilling spirits at one operation.....	Jona. Shaw.....	Palmer, Mass.....	Nov. 13, 1811
Distilling spirits, still slops.....	David White.....	Fredonia, N. Y.....	June 17, 1828
Distilling, by steam.....	Sam. Brown, Ed. West, and Thomas West.....		July 8, 1803
Distilling, by steam.....	John M. Bennett.....	Middletown, Conn.....	May 1, 1810
Distilling, by steam.....	Hez. Carry.....	Brooklyn, N. Y.....	Feb. 16, 1816
Distilling, by steam.....	Richard Wilcox.....	New York.....	April 20, 1820
Distilling, by steam.....	Elias Gielhanson.....	Halifax town's'p, Pa.....	Jan. 14, 1823
Distilling, by steam.....	William Avery.....	Pompey, N. Y.....	May 13, 1825
Distilling, by steam.....	Benjamin Barr.....	Strasburg t'wn'p, Pa.....	April 5, 1828
Distilling, by steam.....	William Berkley.....	Lebanon, Ky.....	May 20, 1830
Distilling, by steam, still.....	Alexander Anderson.....	Pennsylvania.....	Sept. 2, 1794
Distilling, by steam, waste.....	John H. Morton, T. Boyly, & R. Hutson.....	Lexington, Ky.....	April 28, 1816

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Distilling, still for	John Kincaid.....	Pennsylvania.....	Nov. 25, 1794
Distilling, still for	Michael Craft.....	Pennsylvania.....	Oct. 28, 1801
Distilling, still for	William Paine.....	Pennsylvania.....	Aug. 24, 1802
Distilling, still for	John Staples.....	Virginia.....	Dec. 15, 1802
Distilling, still for	John Moffit.....	New York.....	Feb. 1, 1803
Distilling, still for	Lewis Geauly.....	Maryland.....	Aug. 4, 1803
Distilling, still for	William Wighton.....	New Jersey.....	Jan. 30, 1804
Distilling, still for	Stephen Steward.....	Walpole, N. H.....	June 28, 1807
Distilling, still for	Edward Richardson.....	Fredericktown.....	Oct. 3, 1807
Distilling, still for	William Thornton.....	Washington, D. C.....	Dec. 13, 1807
Distilling, still for	Henry Wittmer.....	Lancaster, Pa.....	Sept. 19, 1811
Distilling, still for	Hiram Whitcomb.....	Cornwall, Ct.....	Nov. 24, 1812
Distilling, still for	John J. Giraud.....	Baltimore, Md.....	June 26, 1813
Distilling, still for	Charles F. Fisher.....	York, Pa.....	July 12, 1813
Distilling, still for	Ezra Talmage.....	Richmond, Va.....	April 9, 1814
Distilling, still for	Robert Gillispie.....	Seneca, N. Y.....	Jan. 31, 1815
Distilling, still for	Jos. White.....	Baltimore, Md.....	Jan. 15, 1816
Distilling, still for	Montgomery Stevens.....	New York.....	June 17, 1816
Distilling, still for	B. J. Kellenback.....	Philadelphia, Pa.....	Oct. 17, 1822
Distilling, still for	Edmund Capen.....	Boston, Mass.....	Jan. 17, 1827
Distilling, still for	Malcolm McGregor.....	New York.....	June 15, 1827
Distilling, still for	Elias Herr.....	Lampeter town'p, Pa.....	Dec. 24, 1833
Distilling, still for	Jacob Weitzell.....	Lancaster, Pa.....	Jan. 30, 1834
Distilling, still for, or boiler for..	Leonard Beatty.....	New York.....	Jan. 19, 1804
Distilling, still for, and boiler for..	John Naylor.....	Richmond, Va.....	Mar. 31, 1804
Distilling, still, boiler, and worm.	Thomas Weston.....	Peacham, Vt.....	Feb. 13, 1815
Distilling, still, boiler, and setting:	John Miller & B. Clements	Clemmons ville, N.C.....	June 24, 1828
Distilling, still, condenser.....	Thomas O. Conner.....	New York.....	July 9, 1807
Distilling, still, condensing tub...	James Wheately.....	Fauquier co., Va.....	Nov. 13, 1813
Distilling, still.—See <i>Cooking, Class 5.</i>			
Distilling, still, copper.....	John Wright & David Polley.....	New York.....	April 4, 1833
Distilling, still double, perpetual..	John J. Giraud.....	Baltimore, Md.....	Dec. 22, 1810
Distilling, still, and evaporator...	Rob. Gillespie.....	Seneca co., N. Y.....	April 2, 1810
Distilling, still, and furnace, setting	Ab. Gibbs.....	Lancaster, Pa.....	Aug. 31, 1813
Distilling, still heads.....	Edw. Richardson.....	Pennsylvania.....	Dec. 16, 1803
Distilling, still heads, quilted clothing for copper.....	Charles Jenks.....	E. Windsor, Ct.....	April 25, 1812
Distilling, still, and large kettles, setting.....	Israel Wood.....	Massachusetts.....	Feb. 21, 1804
Distilling, still, perpetual.....	Simeon Emery.....	Philadelphia, Pa.....	April 9, 1833
Distilling, still, perpetual proof...	B. J. Kellenback.....	Philadelphia, Pa.....	Aug. 6, 1821
Distilling, still, pipes of tin plate, lead, &c.....	Thomas Ewbank.....	New York.....	May 9, 1823
Distilling, still, and rotative steam engine.....	Stedman Adams.....	Hartford, Ct.....	Nov. 21, 1808
Distilling, still, steam.....	Samuel Bacon.....	Lanesborough, Mass.....	Feb. 9, 1811
Distilling, still, steam.....	James G. Foley.....	Harrisburg, Pa.....	Feb. 23, 1826
Distilling, still, steam and boilers.	Jac. Decker.....	Green, N. Y.....	Sept. 2, 1811
Distilling, still, steam & condenser	Richard Sealy.....	Newark, N. J.....	July 25, 1811
Distilling, still, steam & condenser	Benjamin Hall.....	New Haven, Ct.....	May 13, 1814
Distilling, still, steam, perpetual..	John J. Giraud.....	Baltimore, Md.....	May 15, 1811
Distilling, still, steam, perpetual..	John J. Giraud.....	Baltimore, Md.....	Mar. 24, 1814
Distilling, still, steam, perpetual, and water boiler.....	Philo M. Hackley.....	Herkimer co., N. Y.....	Jan. 11, 1811
Distilling, still, steam or stove....	John Stone, jr.....	Worthington, Mass.....	Dec. 8, 1814
Distilling, still, steam and water boiler.....	Phares Bernard.....	Whitestown, N. Y.....	Nov. 17, 1810
Distilling, still, steam and water boiler.....	Phares Bernard.....	Whitestown, N. Y.....	Jan. 16, 1811
Distilling, still, steam and water boiler.	Borden Wilbor & Tim. Soper	Washington co., N.Y.....	Feb. 4, 1811

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Distilling, still, steam and water boiler.	Tim. Soper, jr., and C. Reynolds.....	Hartford, Ct.....	Dec. 2, 1813
Distilling, still, steam and water boiler.....	Stephen Stillwell.....	Bainbridge, N. Y.....	June 26, 1831
Distilling, still tub.....	Isaac Bennitt.....	Newtown, Ct.....	Dec. 12, 1808
Distilling, still, wooden.....	Charles Jenks.....	E. Windsor, Ct.....	April 25, 1812
Distilling, still, wooden.....	John J. Giraud.....	Baltimore, Md.....	Aug. 3, 1813
Distilling, still, worm for.....	Chester Cooke.....	Paris, N. Y.....	Jan. 11, 1823
Distilling, still, worm for*.....	John G. Webb.....	Waterford, N. Y.....	Feb. 11, 1834
Distilling, turpentine, tar, &c.....	William A. Rapp.....	New York.....	Dec. 4, 1815
Distilling, by using the escape steam of a steam engine.....	Davis Embree.....	New Richmond, O.....	Dec. 3, 1827
Distilling, vapor condenser.....	William Howe.....	Pennsylvania.....	April 6, 1803
Distilling whiskey.....	Silas Smith.....	Genesee, N. Y.....	May 23, 1815
Distilling whiskey from corn.....	Daniel Lampion.....	Perrysburg, N. Y.....	Oct. 1, 1830
Distilling, worm, boiler.....	James Truman.....	Philadelphia, Pa.....	June 24, 1809
Distilling, worm, condensing tin, sheet, copper.....	John Taylor.....	Virginia.....	June 13, 1795
Distillery.....	Henry Becker.....	Warwick town'p, Pa.....	June 29, 1833
Distilleries, boilers for.....	Thomas Pierce.....	Hartwick, N. Y.....	Feb. 27, 1819
Distilleries, boilers, anthracite coal, setting for.....	John Lovatt.....	Philadelphia, Pa.....	Mar. 17, 1829
Distilleries, and breweries, washing machine for.....	Leonard Beatty.....	.....	May 17, 1816
Dropsy and epilepsy, cure for...	John S. Fall.....	Rattlesnake Sp'gs, Ga.....	Nov. 25, 1831
Dye, blue.....	John Pearson.....	Connecticut.....	Mar. 3, 1800
Dyeing.....	Harman Hibbard.....	Attica, N. Y.....	May 2, 1843
Dyeing, with alkaline prussiates..	Felix Fossard.....	Pittsburg, Pa.....	Dec. 14, 1832
Dyeing, with alkaline prussiates..	Felix Fossard.....	Philadelphia, Pa.....	April 23, 1834
Dyeing, with alkaline prussiates..	Felix Fossard.....	Philadelphia, Pa.....	Nov. 7, 1835
Dyeing, art of.....	Patrick Magennis.....	Patterson, N. J.....	April 21, 1838
Dyeing black, mordant for.....	John D. Prince.....	Lowell, Mass.....	April 24, 1841
Dyeing cotton in the staple, or cotton wool.....	James R. Stewart.....	New York.....	Nov. 11, 1831
Dyeing furs, wool, and hair skins.	Denison Williams.....	Albany, N. Y.....	Nov. 14, 1846
Dyeing hair of seal skins.....	Joseph Herring.....	New York.....	Nov. 16, 1826
Dyeing hats.....	Israel Taylor.....	Trenton, N. J.....	Aug. 27, 1824
Dyeing hats.....	Morris Burt.....	Warwick, N. Y.....	Nov. 8, 1825
Dyeing hats.....	Aaron Gould.....	Washington, Ct.....	Jan. 11, 1836
Dyeing hats, and airing frame, hat block.....	Norris L. Canfield..	Wilton, Ct.....	Mar. 14, 1834
Dyeing leather.—See Class 16.	Adolphus G. Trott...	New York.....	Feb. 11, 1825
Dyeing nankeen.....	James Rennie.....	Lodi, N. J.....	Aug. 9, 1834
Dyeing and printing, with two or more colors at one impression..	William Duncan.....	Bellville, N. Y.....	Sept. 18, 1835
Dyeing and printing woollen cloths	Abner Stearns.....	W. Cambridge, Mass.....	Mar. 22, 1809
Dyeing silk.....	William Barrett.....	.....	June 27, 1809
Dyeing silk.....	Thos. Harrison and R. Pierpont.....	New York.....	Oct. 18, 1814
Dyeing silk, and finishing.....	Abner Stearns & Wm. Barrett.....	W. Cambridge, Mass.....	Jan. 30, 1818
Dyeing silk.....	Abner Stearns & Wm. Barrett.....	Boston, Mass.....	Sept. 8, 1818
Dyeing, by steam.....	Reuben Wood.....	Erie, N. Y.....	Aug. 25, 1829
Dyestuffs from spent madder...	Frederick Pfanner.....	Providence, R. I.....	Sept. 13, 1845
Dyeing silk and finishing.....	Abner Stearns & Wm. Barrett.....	W. Cambridge, Mass.....	Jan. 30, 1818
Dyeing wool.....	Felix Fossard.....	Philadelphia, Pa.....	April 21, 1838
Dyeing yarn from the beam†.....	William Spencer.....	Lowell, Mass.....	Sept. 25, 1838
Dyeing yarn, machinery for.....	Amoskeag Manufact'g Co., ass'nee of Wm. A. Burke.....	Manchester, N. H.....	May 30, 1844
Dysentery, dyspepsy, &c.....	Truman Powell.....	Burlington, Vt.....	Feb. 2, 1828

* Additional improvement, April 7, 1838.

† Reissued May 28, 1840; additional imp't, April 17, 1841.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Elixir of life.....	Jules Ruco.....	Baltimore, Md.....	Mar. 29, 1817
Elixir, restorative.....	Harvey Frink.....	Northampton, Mass.....	June 6, 1812
Elixir, vegetable.....	Samuel Cooley.....	Bolton, Ct.....	Nov. 12, 1803
Evaporating boiler.....	John Moffit.....	New York.....	Feb. 1, 1803
Evaporating furnace.....	John Richardson.....	New York.....	Sept. 13, 1802
Evaporating furnace.....	John Richardson.....	New York.....	April 4, 1803
Evaporating liquids.....	Charles Sholes.....	Phelps, N. Y.....	July 26, 1826
Evaporating pan, or furnace.....	Augustus Kolb.....	Steubenville, Ohio.....	Jan. 14, 1825
Evaporating vessels to carry caloric.....	John C. Douglas.....	Cincinnati, Ohio.....	Feb. 19, 1833
Evaporation.....	Thomas Arnold.....	.....	Nov. 5, 1806
Evaporator.....	Thos. Bedwell and B. Henfrey.....	Pennsylvania.....	Feb. 12, 1801
Evaporator.....	Samuel T. Harrison..	Baltimore, Md.....	Dec. 31, 1838
Evaporating liquids by steam....	J. J. Mapes and W. A. Cox.....	New York, N. Y.....	Jan. 7, 1846
Extracts, making.....	T. Close & J. C. Sanford	Rye, N. Y.....	Mar. 18, 1836
Extracting color from dyewoods.	Laurens Kent.....	Dorset, Vt.....	Sept. 27, 1838
Febrifuge.....	Asa Johnson.....	Northumberland, Pa	Jan. 11, 1812
Fermenting apple cider.....	William Elder.....	New Brunswick, N.J	Aug. 21, 1822
Fermenting and distilling spirits..	Ira Belknap.....	Millersburg, Pa.....	July 20, 1827
Fermenting and distilling spirits..	Isaiah Stowell.....	Manchester, N. H.....	Feb. 5, 1836
Fermentation, vinous process of conducting.....	Charles O. Wolpers..	Cincinnati, Ohio.....	July 16, 1841
Fluid, blue for writing.....	Henry King.....	Baltimore, Md.....	Nov. 7, 1839
Fomentation, preparing & applying	Timothy L. Jennison..	Cambridge, Mass.....	Aug. 30, 1832
Freezers, artificial.....	Nancy M. Johnson.....	Philadelphia, Pa.....	Sept. 9, 1843
Friction matches.....	Elisha Smith.....	Erving, Mass.....	Oct. 3, 1844
Furnaces.—See Class 5.			
Fuse, safety, blasting rocks.—See	Class 9.		
Galvanic electricity, to cure diseases.....	Daniel Harrington....	Philadelphia, Pa....	Mar. 31, 1835
Galvanic electricity, applied to the surface of the human body.....	Daniel Harrington....	Philadelphia, Pa....	April 8, 1835
Galvanic fluid, curing diseases....	Daniel Harrington....	Philadelphia, Pa....	July 22, 1833
Galvanic fluid, curing diseases....	Daniel Harrington....	Philadelphia, Pa....	Jan. 27, 1834
Galvanism, for salivation.....	William Phœbus.....	New York.....	June 9, 1807
Gas, antiseptic.....	J. G. M. Picornell.....	New York.....	Mar. 24, 1803
Gas, apparatus for generating*....	Amariah Pierce.....	Philadelphia, Pa....	June 27, 1846
Gas, carburetted hydrogen.....	Benjamin Kugler.....	Philadelphia, Pa....	April 23, 1816
Gas, combustible.....	William Garnett.....	New York.....	Dec. 27, 1822
Gas, inflammable, during the combustion of anthracite coal.	M. Ward and R. W. Hall.....	Baltimore, Md.....	Jan. 19, 1828
Gas, improvement in the manufacture of |.....	George Michiels.....	Paris, France.....	Oct. 3, 1846
Gas, lamp.—See Class 5.			
Gas light.....	Benj. F. Coston.....	Washington, D. C..	Jan. 31, 1845
Gas light, from cotton seed.....	Denison Olmstead....	New Haven, Ct.....	July 21, 1827
Gas, manufacturing, for illuminating, generating, &c., light....	Joseph Boston.....	New York.....	Feb. 11, 1831
Gas, manufacturing from oil.....	Solomon Andrews.....	Perth Amboy, N. J.	April 15, 1831
Gas, manufacturing, by spirit lamp	Solomon Andrews.....	Perth Amboy, N. J.	May 5, 1831
Gas metres.....	Henry Robinson.....	Boston, Mass.....	Mar. 10, 1831
Gas metres.....	Chris'r F. Brown.....	Baltimore, Md.....	June 22, 1842
Gas metres, self-acting, dry.....	Samuel Clegg.....	Great Britain, Eng.	Sept. 22, 1838
Gasmeter.....	Henry B. Williams.....	Baltimore, Md.....	June 11, 1830
Gasmeter.....	James Bogardus.....	New York.....	Oct. 7, 1834
Gas, purifying, for illumination..	Daniel Garnet.....	Richfield, N. Y.....	June 27, 1840
Gelatine, preparation of, portable.	Peter Cooper.....	New York.....	June 10, 1845
Gin, making.....	Erastus V. Freeman.....	.....	April 10, 1811
Glue, fish.....	Daniel Waldron.....	New York.....	Mar. 4, 1819
Glue, manufacturing.....	John H. Mark.....	Philadelphia, Pa....	Oct. 3, 1822
Glue, manufacturing.....	Peter Cooper.....	New York.....	April 29, 1839
Glue, manufacturing.....	Jonathan Morgan.....	Portland, Me.....	Sept. 18, 1835

* Antedated Dec. 27, 1845.

† English patent, May 24, 1846.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Glauc, manufacture of.....	Herman G. C. Paulsen	New York, N. Y....	Feb. 28, 1842
Gout nostrum.....	Elisha Smith.....	New York.....	Dec. 15, 1838
Gout and rheumatism, cure for...	William A. Parker...	Accomack co., Va...	Nov. 4, 1831
Gum elastic, manufacturing.....	Charles Goodyear....	Roxbury, Mass....	July 24, 1838
Gum elastic, for vessels.—See Class 7.			
Gum, senegal, substitute for*....	Walter Leveridge....	Dorchester, Mass...	Aug. 8, 1837
Gypsum, applied to cisterns.....	J. Flint and C. Mills..	New York, N. Y....	Mar. 4, 1836
Hemp preparation.....	Richard Deering, sen.	Louisville, Ky.....	June 25, 1845
Hemp preparation.....	Thomas H. Barlow ..	Lexington, Ky.....	June 25, 1845
Hemp rotting.....	Geo. W. Billings and John Harrison.....	Glasgow, Mo.....	May 10, 1845
Hose, construction of.....	Horace H. Day.....	Jersey City, N. J...	Aug. 16, 1845
Ice, accumulating.—See Class 22.			
Igniting powder, and other substances, by applying hydrogen gas and platina.....	Alexander Jones.....	Mobile, Ala.....	April 22, 1834
Incrustation in steam boilers, preventing.	S. D. Anthony and D. Baraum.....	New York, N. Y....	Dec. 22, 1846
India rubber.—See Class 22.			
India rubber fabrics.....	Nelson Goodyear....	Newtown, Ct.....	May 13, 1845
India rubber fabrics.....	Charles Goodyear....	New York.....	June 10, 1845
India rubber, manufacture of.....	Stephen C. Smith....	New York.....	Dec. 7, 1837
India rubber, manufacture of.....	Nelson Goodyear....	Newtown, Ct.....	April 22, 1845
India rubber, shirring machine†..	James Bogardus.....	New York.....	Nov. 21, 1845
India rubber, softening previous to grinding.....	J. W. Harmon.....	New York, N. Y....	Jan. 15, 1846
India rubber threads, machine for cutting.	Horace H. Day.....	Jersey City, N. J. }	June 7, 1845
	H. G. Tyre & J. Helm	N. Brunsw'k, N. J. }	
India rubber shreds, machine for cutting†.....	James Bogardus.....	New York.....	Nov. 21, 1845
Ink, black, making.....	Peter Ferris.....	Greenwich, Ct.....	Dec. 5, 1842
Ink, indelible writing.....	Thomas J. Spear.....	New Orleans, La...	June 16, 1841
Ink, printers'.....	Berry Chase.....	New London, Ct...	June 28, 1810
Ink, printers'.....	Edward Clark.....	Brooklyn, N. Y....	July 5, 1845
Ink, writing.....	John D. Myers.....	New York.....	Sept. 26, 1835
Iron, protecting from oxidation...	Palmer Sumner and P. Naylor.....	New York.....	Oct. 18, 1839
Isinglass.....	William Hall.....	Boston, Mass.....	Mar. 23, 1822
Isinglass.....	Joseph Hastings.....	Cambridge, Mass...	Aug. 14, 1822
Isinglass, or ichthyocolla.....	Wm. Norwood, John Burns, Jabez Rowe, and Josiah Haskell..	Gloucester, Mass...	Jan. 21, 1834
Japan, applied to leather.....	William Gates.....	Hanover, N. Y....	Nov. 14, 1835
Juices, saccharine, evaporating...	Alfred Stillman.....	New York.....	Aug. 17, 1843
Lampblack.....	Joseph Hastings.....	Cambridge, Mass...	Aug. 15, 1826
Lampblack, making.....	John G. Mini.....	Philadelphia, Pa...	Nov. 13, 1844
Lard, preparing.....	H. A. Amelung.....	Alton, Ill.....	Nov. 13, 1844
Lard, rendering.....	Ebenezer Wilson.....	Cincinnati, Ohio...	Oct. 9, 1844
Lard, or tallow, converting into separate substances.....	Benjamin Lapham....	Lexington, Ky.....	Mar. 1, 1833
Leaching ashes.....	Garret Clements.....	Canandaigua, N. Y.	June 10, 1837
Leaching ashes.....	Elijah Williams.....	Westfield, N. Y....	Jan. 9, 1838
Lead, carbonate of.....	Charles Ripley.....	Saugerties, N. Y....	July 11, 1837
Lead pipes, method of tinning....	R. W. Lowber, ass'ee of Ward, Selden, & Kneeland.....	New York.....	Mar. 12, 1845
Lead, red.....	Samuel Witherill, jr..	Philadelphia, Pa...	Nov. 1, 1811
Lead, white.....	Samuel Witherill, jr..	Philadelphia, Pa...	Oct. 29, 1811
Lead, white.....	Elisha De Butts.....	Baltimore, Md.....	May 5, 1814
Lead, white.....	James Welsh & Thos. Evans.....	Philadelphia, Pa...	Aug. 15, 1814
Lead, white.....	George F. Hagner....	Philadelphia, Pa...	Oct. 13, 1817
Lead, white.....	Edward Clark.....	Philadelphia, Pa...	Mar. 28, 1818
Lead, white.....	Joseph Richards.....	Philadelphia, Pa...	May 28, 1818

* Antedated May 30, 1837.

† Antedated May 21, 1845.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Lead, white	John Burney.....	N. Haven town'p, O.	Jan. 2, 1839
Lead, white	George A. Harrison..	New York.....	July 30, 1831
Lead, white	Homer Holland.....	Westfield, Mass....	Mar. 18, 1836
Lead, white*	Edward Clark.....	Saugerties, N. Y....	Dec. 4, 1833
Lead, white	Joseph Richards.....	Philadelphia, Pa....	Dec. 2, 1836
Lead, white	Peregrine Phillips....	Campbell co., Ky....	April 17, 1837
Lead, white	William Cumberland..	New York city.....	June 7, 1833
Lead, white	Homer Holland.....	Westfield, Mass....	Nov. 3, 1836
Lead, white, manufacture of.....	Chas. Button and Har- rison G. Dyar.....	London, England...	April 10, 1839
Lead, white, manufacture of.....	Smith Gardner.....	New York.....	Aug. 28, 1840
Lead, white, preparing white lead paint.....	Horace Cory.....	England.....	Oct. 8, 1840
Lead, white, separating the oxide of lead.....	James N. Trovillo....	Christiansburg, Va..	Mar. 31, 1840
Lead, white, separating the oxide of lead.....	Edward Clark.....	Saugerties, N. Y....	July 11, 1839
Lead, white, separating the oxide of lead.....	Edward Clark.....	Saugerties, N. Y....	Dec. 5, 1839
Lead, white, and Paris white	Cyrus Watrous.....	Groton, Ct.....	Jan. 26, 1833
Lead, white, screening	Samuel Witherill, jr..	Philadelphia, Pa....	Nov. 1, 1811
Lead, white, washing	Samuel Witherill, jr..	Philadelphia, Pa....	Oct. 29, 1811
Lead, white, and white flake.....	Alexander Hamilton..	New York.....	Nov. 8, 1813
Ley, cleansing, melting potash.....	Jonathan Jones.....	Fabius, N. Y.....	Feb. 11, 1809
Light, extracting from fuel.....	Benjamin Henfry.....	Pennsylvania.....	April 16, 1802
Light, extracting from fire.....	Isaiah Jennings.....	New York.....	June 11, 1839
Light, and heat, generating.....	H. L. Barnum.....	New York.....	June 2, 1836
Light, producing by a combination of liquids.....	Isaiah Jennings.....	New York.....	June 13, 1831
Light, producing by a combination of liquids, to lamps without wicks	Isaiah Jennings.....	New York.....	Oct. 16, 1830
Light, from stone coal gas.....	Lewis Enters and W. Zigler.....	Georgetown, D. C..	Sept. 28, 1815
Lime, hydraulic.....	Robert Leckie.....	Washington, D. C..	Mar. 31, 1829
Liquids, charging with gas.....	Jos. H. Laning.....	Davidson co., Tenn.	Dec. 23, 1834
Liquids, mode of evaporating.....	William Henry.....	Laporte, Ind.....	Jan. 8, 1839
Liquids, skimming.....	Charles Harrival.....	Baton Rouge, La....	April 26, 1845
Liquor, cooling.....	David Lowndes.....	Pennsylvania.....	July 21, 1803
Liquor, determining the strength of	William Cornelf.....	Brooklyn, N. Y....	Aug. 20, 1837
Lotion, magic.....	John Hopkins.....	Philadelphia, Pa....	Aug. 24, 1809
Magnesia, medicated, liquid	John Callan.....	Philadelphia, Pa....	May 4, 1818
Magnesia, medicated, liquid	Richard Jordan & M. Anderson.....	Philadelphia, Pa....	June 25, 1834
Magnesia, preparing.....	William Dunn.....	Boston, Mass.....	April 1, 1812
Magnesia, preparing.....	William Dunn.....	Boston, Mass.....	April 8, 1813
Malt, washing.....	William Ellis.....	New Jersey.....	June 18, 1799
Marble, granite, &c., artificial....	Louis Matthew.....	Brooklyn, N. Y....	Mar. 7, 1827
Mash, cooling, for distillation.....	Thomas Whitemell....	Scotland Neck, N. C.	Sept. 2, 1815
Mash, machine for distilleries.....	Warham Whitney....	Rochester, N. Y....	Jan. 19, 1826
Match lights, and boxes.....	Richard Allison and N. S. Allison.....	Burlington, N. J....	Mar. 26, 1814
Matches, friction.....	Alonzo D. Phillips....	Springfield, Mass...	Oct. 24, 1836
Matches, friction.....	William K. Ashard....	New York.....	June 24, 1843
Matches, friction, composition of matter.....	John H. Stevens.....	New York, N. Y....	Nov. 16, 1839
Matches, friction, composition of matter.....	Norman T. Winans, Theodore & Thadde- us Hyatt.....	New York, N. Y....	Dec. 23, 1841
Matches, friction, composition of matter.....	Norman T. Winans, Theodore & Thadde- us Hyatt.....	New York, N. Y....	Dec. 23, 1841
Matches, friction, preventing acci- dental ignition.....	John H. Stevens.....	New York, N. Y....	Nov. 16, 1839
Matches, friction, retaining fire....	John H. Stevens.....	New York, N. Y....	Nov. 16, 1839

* Released July 3, 1832, and June 26, 1836; extended Nov. 16, 1842, 7 years from 4th December, 1842.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Matches, friction, ignitable compound	Stephen Blaisdell	Brunswick, Me.	Mar. 18, 1842
Matches, friction, paste for	George W. Carleton ..	Bath, Me.	May 20, 1842
Matches, locofoce, dipping	Jehu Hatfield	Stillwater, New York	June 3, 1837
Mash tube	Benjamin Roop	Pekin, Ohio	May 6, 1844
Mead, carbonated	James Heaton	New York	July 28, 1819
Mead, carbonated, sarsaparilla ..	John Schieffelin	New York	July 19, 1824
Mead, composition	T. T. Kimball and A. H. White	Dedham, Mass.	Sept. 26, 1835
Mead, sarsaparilla, portable	Jonas C. Brigham	Methuen, Mass.	July 25, 1833
Medicine	Samuel Thompson	Surrey, N. H.	Mar. 2, 1813
Medicine	Lorenzo Dow	Hebron, Conn.	Nov. 24, 1830
Medicine	John Prentiss	New London, Conn.	Mar. 27, 1822
Medicine	Samuel Thompson	Boston, Mass.	Jan. 28, 1823
Medicine	Fitzgerald Bird	Hancock, Ga.	April 16, 1828
Medicine	John Dent	Augusta, Ga.	July 2, 1828
Medicine	Jos. Baker	Jefferson towns'p, O.	May 5, 1831
Medicine, administering, by steam	Charles Whitlow	New York	Feb. 16, 1825
Medicine, anti-dysenteric	John G. Vought	Rochester, N. Y.	Dec. 4, 1821
Medicine, anti-spasmodic tincture.	Horton Howard	Columbus, Ohio	Aug. 25, 1832
Medicine, astringent tonic	Horton Howard	Columbus, Ohio	Aug. 25, 1832
Medicine, bitter tonic	Horton Howard	Columbus, Ohio	Aug. 25, 1832
Medicine, botanic	Samuel Thompson	Boston, Mass.	May 6, 1836
Medicine, canker drops	David Holbrook	Onondaga co., N. Y.	Mar. 28, 1814
Medicine cases	Allen Harrington	Otsego, N. Y.	July 16, 1811
Medicine, compound tincture of myrrh	Horton Howard	Columbus, Ohio	Aug. 25, 1832
Medicine, cure for the bite of a mad dog.	Elizabeth Stoy, executrix of Wm. Stoy ..	Lebanon, Pa.	June 9, 1809
Medicine, cure for cholera	Jacob Houck	Baltimore, Md.	Oct. 25, 1832
Medicine, cure for cholera	Anthony Hann, sen. ..	Lancaster, Ky.	Aug. 12, 1833
Medicine, diaphoretic or sweating powders	Horton Howard	Columbus, Ohio	Aug. 25, 1832
Medicine, for scrofula, &c.	Gideon Jaques	Wilmington, Del.	July 16, 1824
Medicine for the treatment of syphilis, &c.	Silas T. Thurman	Lincoln, Ky.	July 23, 1841
Medicine, worm destroying	John J. Oellig	Waynesborough, Pa.	Oct. 28, 1837
Metallic compound for sheathing vessels	John Revere	Boston, Mass.	Mar. 24, 1831
Metallic solution, for preserving timber	Webster Flocton	Great Britain, Eng. ..	Feb. 16, 1837
Mineral water, apparatus	James S. Ewing	Philadelphia, Pa.	Feb. 10, 1817
Mineral water, apparatus	Samuel Fahnestock ..	Lancaster, Pa.	April 23, 1819
Mineral water, artificial	Joseph Hawkins	Baltimore, Md.	Sept. 7, 1809
Mineral water, family fountain ..	Garret E. Pendergast ..	Philadelphia, Pa.	Aug. 18, 1815
Mineral water, giving temperature to	Joseph Hawkins	Philadelphia, Pa.	April 5, 1823
Mineral water, manufacturing	Benjamin Marshall	Albany, N. Y.	Dec. 5, 1815
Mineral water, manufacturing	William Mead	Newburg, N. Y.	April 12, 1831
Mineral water, saturating with fixed air.	Charles D. Simmons & J. J. Rundell	Charleston, S. C.	April 16, 1810
Mineral water, Seidlitz or Rochelle	Joseph Boston	New York	May 5, 1822
Mineral water, soda apparatus	George Ott	Norfolk, Va.	June 18, 1830
Mineral water, soda apparatus	Justus Perkins	Brutus, N. Y.	May 3, 1831
Mineral water, soda apparatus	John Ambler, jr.	New Berlin, N. Y.	June 13, 1831
Mineral water, soda apparatus	Alonzo L. Smith	Brutus, N. Y.	June 13, 1831
Mineral water, soda apparatus	Noah H. Coleman	Mentz, N. Y.	July 20, 1831
Mineral water, soda apparatus	Ambrose Church	Canandaigua, N. Y.	July 20, 1831
Mineral water, soda apparatus	George H. Duffey	Alexandria, D. C.	April 19, 1832
Mineral water, soda apparatus	Joseph H. Laning	Philadelphia, Pa.	June 22, 1832
Mineral water, soda fountain	James Fraley and A. Kirkpatrick	Urbana, Ohio	May 9, 1832
Mineral water, soda fountain	Jacob Ebert and Geo. Dulty	Wheeling, Va.	April 24, 1833

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Mineral water, soda fountain	Joseph Boston and T. Bryant	New York	April 11, 1836
Mineral water, soda fountain	Lansing B. Swan	Rochester, N. Y.	Nov. 3, 1838
Mineral water, soda fountain, portable	Lemuel B. White	Cincinnati, Ohio.	Aug. 9, 1839
Oils, animal, purifying	Alfred Traband	New York, N. Y.	Nov. 21, 1842
Oil, bene	William Few	New York	Mar. 1, 1809
Oil, castor, clarifying	John Hallock	Burlington, N. J.	Nov. 5, 1818
Oil, castor	Timothy Pharo	Tuckerton, N. J.	Feb. 5, 1822
Oil, coloring, lamp	Ezra Bourne	New York	Mar. 4, 1834
Oil, columbian	Thomas Paul	Baltimore, Md.	Feb. 23, 1811
Oil, cotton seed	George P. Digges	Albemarle, Va.	Dec. 16, 1820
Oil, cotton seed	Gideon Palmer	Montville, Conn.	Dec. 14, 1830
Oil, cotton seed, purifying	John J. Giraud	New York	Aug. 14, 1833
Oil, extracting	Charles Whiting	Massachusetts	Mar. 2, 1799
Oil, extracting, from flax seed	David Dodge	Hamilton, Mass.	May 14, 1827
Oil, extracting, from palma christi	John G. Gebhard	New York	Feb. 4, 1800
Oil, fish, whale, and sperm	David C. Knapp, Chas. H. Knapp, and Allen Howland	Oswego, N. Y.	May 29, 1832
Oil from rosin	William T. Clough ..	Jersey City, N. J.	April 22, 1845
Oils, fish and other, process of cleansing	Patrick Fitz Simmona ..	West Troy, N. Y.	April 4, 1846
Oil, flax seed	C. How, F. Brewster, and John Johnston ..	Moreto'n, Colches-ter, & Chittenden Vt.	May 24, 1828
Oil of hazze, preparation of	Preswick and Fisher ..	New York	Aug. 17, 1835
Oil, infusing into leather	Henry Guest	New Jersey	July 16, 1801
Oil, lamp, purifying	Eli Fourestier	Philadelphia, Pa.	Nov. 17, 1808
Oil, linseed, for varnish	N. S. Parmentier	Philadelphia, Pa.	Jan. 30, 1809
Oil, linseed, substitute for	Todd and Peabody	Washington, D. C.	July 7, 1835
Oil, poppy seed	Dan. Markum	Lenox, N. Y.	Dec. 2, 1824
Oil, purifying	Lewis Mecese	New York	June 23, 1812
Oil, purifying, sperm and whale ..	John L. Embree	New York	June 13, 1831
Oil, pyroligneous, and acid, for tanning	Horace H. Hayden ..	Baltimore, Md.	Nov. 26, 1823
Oil, refining	Charles E. Ruggles ..	New York	July 20, 1829
Oil, sod, for leather	George Poyzer	Philadelphia, Pa.	May 10, 1805
Oil, sperm, clarifying	Richard Robotham ..	New York	Aug. 14, 1799
Oil, sperm, whale, cotton seed, &c., clarifying	Ephraim C. Moss	New York	Dec. 26, 1832
Oil, and spirits of turpentine, preparing for paint	John G. Pendergast ..	Palmyra, N. Y.	July 9, 1830
Oil, substitute for, in mixing paint ..	L. J. Van Kleeck	Poughkeepsie, N. Y.	Nov. 23, 1829
Oil, and sugar, boiler, for refining ..	William A. Archbald ..	New York	May 29, 1828
Oil from the sun flower	Charles A. Barnitz ..	Spring Garden, Pa.	Oct. 20, 1830
Oils, volatile, for illuminations, modes of using	B. F. Greenough	Boston, Mass.	Nov. 15, 1843
Oils, whale and spermaceti, method of detecting admixtures and adulterations of	John W. Harris	Dorchester, Mass.	Sept. 3, 1840
Oil, whale, clarifying	Benjamin Folger	Hudson, N. Y.	Jan. 2, 1792
Ointment	William Judkins	Smithfield, Ohio.	June 26, 1816
Ointment, (on Judkins's,)	Nathan Shepherd	Belmont co., Ohio.	July 9, 1830
Ointment, for cancer	Elias Gilman	Licking, Ohio.	Mar. 31, 1836
Ointment, cure of diseases	Wm. Waller Gray	Richmond, Va.	Mar. 18, 1835
Ointment, mercurial, machines for making	James W. W. Gordon ..	Baltimore, Md.	June 5, 1844
Ointments for piles	William W. Riley	Mansfield, Ohio.	Jan. 31, 1844
Oleaginous seeds, preparing for pressing	James Creswell	Pittsburgh, Pa.	July 31, 1837
Opium, pressing, from poppy	Lucius Cook	Shrewsburg, N. H.	April 20, 1832
Oxymuriate of lime, preparing	Jonas Kendall	Lincoln, Mass.	Jan. 28, 1820
Paint, brown	Thomas Miller, jr.	Madison co., N. Y.	Jan. 25, 1815
Paint and colors, preparing	Henry Alexander	Baltimore, Md.	Jan. 14, 1813

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCES.	REGISTERED.
Paint, composition.....	Philip A. Elipatine....	New Baltimore, Va.	July 20, 1831
Paint, composition.....	H. Hibbard.....	Darien, N. Y.....	Sept. 26, 1832
Paint, composition.....	William Cox.....	Dayton, Ohio.....	Oct. 28, 1832
Paint, composition, for drying...	Nathan Hemenway...	W. Springfield, Mass.	Feb. 22, 1833
Paint, composition of matter for..	Chandler Metcalf....	Hanover, N. H.....	Feb. 25, 1833
Paint, or composition of matter for, and lubricating ships' ways for launching.....	Whitman Mead.....	Greenwich, Conn...	Oct. 25, 1832
Paint, composition, metallic oxide for white.....	Forrest Shepherd....	Fredericksburg, Va.	Mar. 18, 1835
Paint, or composition, rendering silk, &c., water proof.	Elisha Winalow, Thomas Chandler, John M. Millikin, and Ezekiah Winslow...	Unity, Maine.....	June 4, 1832
Paint, composition, stone.....	Elisha Skinner and John Webster.....	Sandwich, N. H....	May 28, 1833
Paints, for fire and water proof...	Joseph Weisman.....	Philadelphia, Pa....	Feb. 20, 1844
Paint, galvanic, protecting iron from rust.....	Lewis Knapp.....	New York.....	July 1, 1840
Paints or pigments, improvement in.*	Francis G. Spilsbury, Fanny Corboux, and Alexander S. Byrne	England.....	July 10, 1840
Paint, &c., vessels for preserving.	John Rand.....	Citizen United States, now in England..	Sept. 11, 1841
Paint, making ores into.....	Robert Nicholson....	Bairdstown, Ky....	June 23, 1812
Paint, making ores into.....	Borden Wilbur.....	Whitestown, N. Y..	Feb. 10, 1814
Paint, mixing.....	Jonathan Linnell, jr.	Orleans, Miss.....	Mar. 26, 1831
Paint, for plastered walls.....	Alexander Thompson.	Bethany, N. Y.....	Feb. 2, 1828
Paint, protection of buildings....	Louis Paimboeuf.....	Washington, D. C..	Nov. 11, 1837
Paints, water proof.....	Thomas E. Warren....	Troy, N. Y.....	Mar. 15, 1845
Paint, white, mode of preparing..	Henry C. Otto.....	Philadelphia, Pa....	Feb. 28, 1842
Paint, white, water color†.....	Forrest Shepherd....	New Haven, Ct....	July 17, 1837
Paint, yellow.....	B. A. De Carendeffez.	New York.....	Sept. 2, 1806
Panacea.....	Jacob Houck.....	Baltimore, Md.....	May 9, 1833
Paste, Italian, macaroni.....	John B. Sartori.....	Philadelphia, Pa....	July 13, 1807
Pearl ash, making, without ovens	Reuben Ainsworth...	.....	May 14, 1806
Pearl ash.....	J. and N. Patee.....	Linklean, N. Y....	May 14, 1836
Pigment, black, for printing or painting.....	Jacob Cist.....	Wilkesbarre, Pa....	Oct. 26, 1808
Pigment, black, from anthracite coal.....	Nathaniel Chater....	New York.....	Oct. 5, 1839
Pills, &c., mode of counting.—See Class 22.	Samuel Cooley.....	Connecticut.....	June 6, 1798
Pills.....	John Hawks.....	Connecticut.....	Dec. 14, 1799
Pills.....	Benjamin Duvall....	Virginia.....	May 3, 1797
Pills, anti-bilious.....	Thomas H. Ranson....	Connecticut.....	July 24, 1802
Pills, anti-bilious.....	Thomas H. Ranson....	Connecticut.....	April 4, 1803
Pills, anti-dispeptic.....	George Smith.....	New York.....	Aug. 7, 1821
Pills, anti-dispeptic.....	J. C. M. Brockway...	Lyme, Conn.....	Mar. 13, 1822
Pills, bilious.....	Samuel Lee, jr.....	Connecticut.....	April 30, 1796
Pills, bilious.....	Samuel H. P. Lee....	Connecticut.....	June 26, 1799
Pills, bilious, (Lee's Windham)..	Samuel Lee.....	New London, Conn.	May 24, 1810
Pills, bilious, (Lee's).....	Samuel H. P. Lee....	New London, Conn.	Feb. 8, 1814
Pill boxes.....	Nathan Crary and Edmund P. Crary....	Albany county, N. Y.	April 6, 1830
Pills, family.....	Daniel Coit.....	.....	Oct. 5, 1808
Pills, family.....	David Coit.....	New York.....	June 17, 1820
Pills, machine for making.....	Webster Lewis.....	.....	July 10, 1807
Pills, rheumatic.....	George B. Dexter....	Boston, Mass.....	Dec. 18, 1806
Pills, rheumatic.....	Ezra Deane.....	Biddeford, Mass....	Jan. 13, 1814
Pills, rheumatic.....	Ezra Deane.....	Biddeford, Maine...	Feb. 2, 1826
Pills, and tonic, and aperient...	John J. Oellig.....	Waynesborough, Pa.	Oct. 28, 1837
Pitch, composition.....	Thomas H. Sherman.	Scriba, N. Y.....	Mar. 4, 1836

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN GRANTED.
Fish, making.....	Henry Ruggles.....	New York.....	Mar. 19, 1838
Fish, mixing certain matters for.	Henry Ruggles.....	New York.....	Dec. 2, 1834
Easters, adhesive.....	William H. Shecat and Horace H. Day....	New York.....	Mar. 26, 1845
Plaster, adhesive, spreading.....	B. Morison.....	Milton, Pa.....	Aug. 8, 1837
Polishing powders, for metals....	Holmes Greenwood..	Providence, R. I....	Jan. 28, 1818
Potash.....	Edward Ryan.....	Vermont.....	Nov. 16, 1796
Potash.....	William Frobisher...	Massachusetts.....	Nov. 17, 1796
Potash.....	Thomas Power.....	New York.....	Sept. 19, 1801
Potash, bleaching ashes with the process of.....	Joseph H. Ward.....	Randolph, Ohio.....	July 16, 1841
Potash, chromate of.....	Isaac Tyson, jr.....	Baltimore, Md.....	Oct. 9, 1845
Potash.....	Jos. Bellows, jr., and Ebenezer White....		Dec. 29, 1804
Potash, manufacturing.....	Thomas H. Sherman..	Hastings, N. Y.....	Feb. 2, 1831
Potash, manufacturing.....	Hartsuff and French..	Aurelius, N. Y.....	July 17, 1835
Potash, manufacturing and leach- ing ashes*.....	Ephraim Parce.....	Lincklean, N. Y....	July 20, 1831
Potash, manufacturing and leach- ing ashes.....	Elijah Williams.....	Harbor creek, Pa...	Aug. 16, 1835
Potash, and pearl ash.....	Edward Crafts, jr....	Geneva, N. Y.....	May 12, 1804
Potash, and pearl ash.....	Jac. Latting.....	New York.....	April 26, 1816
Potash, and pearl ash.....	Elijah Williams.....	Erie, Pa.....	Mar. 8, 1836
Potash, and pearl ash, manufactur- ing.....	Samuel Hopkins.....	Vermont.....	July 31, 1790
Potash, sulphate of, separating and collecting.....	Alexander McNitt....	Geneva, N. Y.....	June 15, 1805
Potatoes, mode of preserving.....	Charles S. Edwards...	Rushville, Ind.....	Dec. 31, 1845
Preserving animal substances....	Ezra Dagget and T. Kensett.....	New York.....	Jan. 19, 1825
Preserving animal and vegetable substances.....	Joseph Coppinger....	Beaufort, S. C.....	Nov. 23, 1829
Preserving animal and vegetable substances.....	David Cooley.....	New York.....	Oct. 24, 1814
Preserving apples, fruits, and roots	Amos Hart.....	Wharton t'nship, Pa.	Aug. 10, 1829
Preserving butter.....	Moses Johnson.....	New Hampshire....	June 30, 1797
Preserving butter and eggs.....	Thomas Edmonson....	Pike creek, Md.....	April 26, 1827
Preserving iron from rust.....	M. Sorel.....	Paris, France.....	Dec. 7, 1837
Preserving meats and fruits.....	Jesse Hampton.....	Lexington, Ky.....	Mar. 12, 1830
Preserving meat by means of a va- cuum.....	A. C. Allen.....	Houston, Texas....	Sept. 12, 1846
Preserving plants from frost.....	George Morris.....	Philadelphia, Pa...	July 10, 1799
Preserving shingles from decay...	Foster Henshaw.....	Brookfield, Mass...	Jan. 16, 1834
Preserving timber.....	Charles Morgan.....	Point Coupee, La...	April 12, 1833
Preserving timber and other vege- table products.	John Knowles and Ro- bert Gilbert, execu- tors of Robert Bill..	{ London, England } { New York city.. }	Sept. 21, 1837
Preserving timber by impregnation	Peter Von Schmidt...	Washington, D. C..	June 6, 1846
Preserving timber from worms.....	August Gouthillf....	New York.....	June 14, 1837
Preserving wood from decay.....	Forrest Shepherd....	Fredericksburg, Va.	Aug. 8, 1834
Process, preparing wheat for flour- ing.....	J. W. Howlet and F. M. Walker.....	Greensborough, N.C.	Oct. 14, 1846
Provisions, curing meats.....	George A. Scherpf....	New York.....	May 7, 1845
Provisions, preparing.....	D. Lardner and J. Da- vidson.....	New York.....	Aug. 9, 1845
Pulverator.....	Nathan Jones.....	Boston, Mass.....	July 23, 1816
Pulverizing drugs.....	Isaac Eddy.....	Boston, Mass.....	Dec. 31, 1823
Pulverizing substances.....	Nathan Jones.....	Boston, Mass.....	July 23, 1816
Razor straps, paste for.....	E. M. Pomeroy.....	New Haven, Conn..	Jan. 24, 1821
Razor straps.—See Class 21.			
Rectifying spirits.....	Burgess Allison.....	New Jersey.....	May 12, 1802
Rectifying spirits.....	Burgess Allison.....	New Jersey.....	May 17, 1803
Rectifying spirits.....	Osborn Parsons.....	Hudson, N. Y.....	June 23, 1808
Rectifying spirits.....	A. Pease and S. Beator	Enfield, Conn.....	July 27, 1812

* Reissued January 23, 1834.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Rectifying spirits by distillation..	Robert Mauck.....	Gallipolis, Ohio....	Dec. 7, 1832
Rectifying spirits by steam.....	Jonathan Shaw.....	Southport, N. Y....	June 21, 1832
Rheumatic liniment.....	Abel Broom.....	Hudson, N. Y....	Oct. 17, 1832
Rifles, sharpening edge tools.....	Peleg Barlow.....	Dutchess co., N. Y.	Mar. 1, 1831
Rifles, sharpening edge tools.....	Peleg Barlow.....	Amenia, N. Y.....	June 13, 1831
Ripening and keeping malt liquor and cider.....	Robert Hare.....	Philadelphia, Pa....	Aug. 22, 1811
Rocket, liquid, combustible.....	James Lloyd.....	Adams county, Pa..	May 11, 1813
Saccharine, &c., vinous-fermenta- tion.....	J. J. C. Sheridan.....	London, Eng.....	June 30, 1837
Saccharifying rice and maize.....	Amable J. Brazier....	Philadelphia, Pa....	Oct. 1, 1830
Saccharifying rye and other grain	Amable J. Brazier....	Philadelphia, Pa....	Oct. 1, 1830
Saleratus, making.....	Edward Chamberlin..	Boston, Mass.....	Sept. 7, 1844
Salt apparatus.....	William and John D. Hawkins.....	Raleigh, N. C.....	May 26, 1814
Salt, boiling.....	Osborn Parsons.....	Pittsburg, Pa.....	April 4, 1820
Salt, apparatus for boiling.....	John J. Cabell.....	Lynchburg, Va....	May 28, 1813
Salt boiler.....	R. Griffin and L. Y. Avery.....	Salina, N. Y.....	Mar. 21, 1843
Salt, coarse, manufacturing from salt water.....	Aaron Barnes.....	Deerfield, N. Y....	Sept. 25, 1831
Salt, crystallizing.....	Beriah Douglass.....	Albany, N. Y.....	Sept. 23, 1843
Salt, distillation of.—See <i>Galley, Class 5.</i>	Standfast Smith.....	Suffolk, Mass.....	June 12, 1806
Salt, extracting from sea water...	Standfast Smith.....	Suffolk, Mass.....	June 12, 1806
Salt, extracting, facilitating the process.....	Standfast Smith.....	Suffolk, Mass.....	June 12, 1806
Salt, extracting, facilitating the process.....	Standfast Smith.....	Suffolk, Mass.....	June 12, 1806
Salt, evaporating.....	James Colquhoun....	Charlestown, Va....	Feb. 6, 1833
Salt, furnace and boilers.....	Samuel Anthony.....	Lynchburg, Va....	May 29, 1813
Salt, kettles for boiling.....	Jer. Kendall.....	Yazette co., Pa....	Mar. 18, 1818
Salt works, improvement in.....	Calvin Gintea.....	Geddes, N. Y.....	July 23, 1849
Salt, making.....	Isaac Noyes.....	Kanawha, Va....	Aug. 26, 1843
Salt, making.....	James S. O. Brooks..	Kanawha, Va....	Feb. 12, 1845
Salt, making.....	Isaac Noyes.....	Kanawha Saline, Va	April 25, 1844
Salt, &c., manufacture of.....	Hervey Smith.....	Salina, N. Y.....	July 12, 1843
Salt, manufacturing.....	John Sears.....	Massachusetts.....	Jan. 24, 1799
Salt, manufacturing.....	James Fennel.....	Pennsylvania.....	Sept. 24, 1794
Salt, manufacturing.....	George James.....	Tennessee.....	Nov. 16, 1796
Salt, manufacturing.....	Benjamin Ellicott....	Pennsylvania.....	May 12, 1802
Salt, manufacturing.....	Valentine Peers.....	Virginia.....	Dec. 18, 1802
Salt, manufacturing.....	George Hunter.....	Pennsylvania.....	Mar. 24, 1803
Salt, manufacturing.....	Timothy Alden, jr....	New Hampshire....	May 25, 1803
Salt, manufacturing.....	John G. Taylor.....	.....	Nov. 13, 1805
Salt, manufacturing.....	Timothy Green.....	New York.....	April 1, 1807
Salt, manufacturing.....	Benjamin Wheeler..	Boston, Mass.....	April 17, 1809
Salt, manufacturing.....	Benjamin Wheeler..	Boston, Mass.....	Mar. 28, 1810
Salt, manufacturing.....	Ambrose Dudley.....	King Wm. co., Va..	Mar. 31, 1812
Salt, manufacturing.....	William J. Lewis.....	.....	Feb. 1, 1814
Salt, manufacturing.....	Thomas Hord.....	Caroline co., Va....	April 8, 1814
Salt, manufacturing.....	John J. Cabell.....	Lynchburg, Va....	June 10, 1814
Salt, manufacturing.....	Peter Sarchet, sen....	Cincinnati, Ohio....	Sept. 27, 1814
Salt, manufacturing.....	William J. Lewis.....	.....	Feb. 1, 1816
Salt, manufacturing.....	Everard Hall.....	Princess Anne, Va..	Nov. 14, 1817
Salt, manufacturing.....	Edward D. Colden....	New York.....	Dec. 14, 1822
Salt, manufacturing.....	Peter Cooper.....	New York.....	Dec. 24, 1824
Salt, manufacturing.....	Daniel Gerard.....	Clay co., Ky.....	Jan. 28, 1825
Salt, manufacturing.....	Calvin Guiteau.....	Geddes, N. Y.....	Sept. 9, 1825
Salt, manufacturing.....	Benjah Byington.....	Salina, N. Y.....	Feb. 21, 1827
Salt, manufacturing.....	J. A. Teissier.....	Boston, Mass.....	Jan. 13, 1829
Salt, manufacturing.....	H. J. Tudor.....	Boston, Mass.....	April 11, 1829
Salt, manufacturing.....	Sam'l W. Williams..	Elizabethtown, N. J.	Mar. 29, 1830
Salt, manufacturing.....	Calvin Guiteau.....	Geddes, N. Y.....	Oct. 25, 1832
Salt, manufacturing.....	Richard K. Cralle....	Lynchburg, Va....	Mar. 18, 1836

* Reissued April 11, 1839.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Salt, manufacturing.....	Charles G. Reynolds..	Kanawha, Va.	Mar. 3, 1898
Salt, manufacturing, apparatus...	Ezra Weld.....	Braintree, Mass....	May 16, 1894
Salt, manufacturing, & apparatus for boiling	Alexander Black.....	Barnstable, Mass....	April 4, 1816
Salt, manufacturing, by application of escape heat from steam engines	Alexander Browne...	Salina, N. Y.	June 11, 1829
Salt, manufacturing, boring wells.	Richard Deering.....	.....	May 28, 1814
Salt, manufacturing common.....	George Munger.....	New Haven, Ct....	June 23, 1818
Salt, manufacturing fine & coarse.	Joseph P. Rossiter...	Salina, N. Y.	Mar. 2, 1824
Salt, manufactur'g fine from coarse	Charles W. Sellers...	Alexandria, D. C. ..	Oct. 11, 1811
Salt, manufacturing, & salt boilers	Isaac W. Averill.....	Salina, N. Y.	Nov. 5, 1814
Salt, manufactur'g from sea water	Wm. Barker	Smithfield, R. I.	July 20, 1825
Salt, manufacturing by steam.....	Benjamin Barlow	Geddes, N. Y.	June 25, 1825
Salt, manufacturing by steam.....	Stephen T. Conn.....	Georgetown, D. C. ..	July 12, 1826
Salt, rheum, remedy for.....	Wm. B. Trufant.....	Bath, Maine	Feb. 10, 1838
Salt, supplying.....	Peter Cooper.....	New York.....	Feb. 20, 1836
Salt vats, mode of covering.....	Hattel Tilley	Massachusetts.....	Feb. 12, 1860
Salt water, boiling, (improvement on Moffitt's).....	Zina Phinney.....	Cairo, N. Y.	June 19, 1812
Salt water, evaporator.....	Wm. M. Hawkins.....	King & Queen co., Va	April 23, 1814
Salt water, mode of obtaining....	David & Jo. Ruffner..	Kanawha, Va.	Jan. 18, 1817
Salt water, pan for.....	Wm. Blocksom and J. T. Fracker.....	Zanesville, Ohio....	Mar. 23, 1829
Salt water, purifying.....	Seth Hunt.....	Syracuse, N. Y.	Jan. 23, 1830
Salt water, purifying	Nils Sholtewskii Von Shoultz.....	Salina, N. Y.	July 29, 1837
Salt works, plan for erecting.....	David Thacher.....	Tuckerton, N. J.	Oct. 24, 1816
Salts, manufacturing.....	Borden Wilbur.....	Washington co., N. Y.	Feb. 4, 1811
Salts, manufacturing by solar eva- poration.....	Edw. C. Cooper.....	New York.....	May 16, 1835
Salts, metallic*.. (See Lead white)	Edw. Clark.....	New York.....	Dec. 4, 1828
Salts, neutral, from alkali.....	Benjamin Gorton.....	New York.....	Nov. 29, 1802
Salts, from salts and potash.....	Abner Vansant.....	Jefferson co., Miss..	Sept. 29, 1823
Salt water, separating impurities..	Nehemiah P. Stanton.	Syracuse, N. Y.	Aug. 20, 1846
Salting animal matters.....	Charles Payne.....	South Lambeth, Eng	Sept. 11, 1841
Saturating water with carbonic acid gas, or fixed air.	Chs. D. Simmons and Jean J. Riondell...	Charleston, S. C.	Aug. 16, 1819
Schagliola, shining.....	Salvadore Pinistri...	New York.....	June 18, 1827
Seal skins, manufacturing.....	James Eaton.....	Massachusetts.....	Feb. 16, 1796
Sealing wax, igniting.....	Joseph Fatman.....	Philadelphia, Pa....	April 17, 1844
Silk, removing spots in.....	Aaron & John Hall...	Boston, Mass.....	Dec. 31, 1817
Silk, staining and printing.....	T. & W. Bryan.....	New York.....	June 29, 1821
Silver, new, American.....	J. H. Hagenmacker..	Philadelphia, Pa....	Feb. 11, 1834
Silvering looking glasses†	Thomas Drayton.....	Brighton, England..	Aug. 12, 1844
Sirup, apparatus for filtering and washing animal black, used in clarifying sugar.....	Thomas Oxnard	Cumberland, Me ..	Aug. 6, 1831
Sirup and cane juice, concentrated by steam.....	Daniel Strobel, jr....	Washington, D. C. ..	May 9, 1831
Slates, artificial.....	John Street.....	Philadelphia, Pa....	Nov. 21, 1843
Soap.....	J. R. Vaughan and E. H. Everman.....	Philadelphia, Pa....	Mar. 7, 1846
Soap, improvement in the manu- facture of.....	Dominique F. Albert..	Manchester, G. B....	Mar. 7, 1846
Soap frames‡.....	Joseph Bolton Doe...	London, Eng.....	Mar. 31, 1840
Soap, process of manufacturing||..	Arthur Dunn.....	Stamford Hill, G. B.	Aug. 23, 1839
Soap, making.....	John Nazro.....	Massachusetts.....	Jan. 6, 1797
Soap, making.....	Daniel E. Stillwell...	Utica, N. Y.	July 17, 1837
Soap, making by steam.....	B. Zoll & J. Doyle...	Baltimore, Md.	July 19, 1839
Soap, making by steam.....	John Kennedy.....	Baltimore, Md.	Oct. 1, 1839
Soap and oils, purifying§.....	Arthur Dunn.....	Rotherhithe, Eng....	Dec. 4, 1844
Soda, carbonate of, manufacturing	John Hemming.....	England.....	June 24, 1839
	Harrison Gray Dyar .	Citizen U. S. A., in England.....	

* Reissued July 3, 1832; extended 7 years from Dec. 4, 1842, by act of Congress, of Nov. 16 1842.

† England, Nov. 25, 1843. ‡ Antedated June 14, 1838. || Antedated Aug. 24, '38. § English pat., Nov. 9, '43.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Soda, stannate of*.....	Mercer, Barnes and Greenwood.....	Lancaster co., Eng..	Aug. 12, 1846
Solutions, decoction, evaporating.	J. W. W. Gordon....	Baltimore, Md.....	Oct. 8, 1840
Sores, curing.....	Reuben Bood.....	Centre Lisle, Brown co., N. Y....	Feb. 20, 1836
Spirits, ardent, obtained from lime	James Hale.....	.....	Nov. 22, 1815
Spirits, ardent, from corn and corn cobs.....	Jos. & Stinson Demand	New Jersey.....	Jan. 17, 1816
Spirits, extracting from starch water.....	John Naylor.....	Pennsylvania.....	Mar. 7, 1809
Spirits, proof.....	Benjamin Miller.....	North Salem, N. Y.	Feb. 21, 1814
Spirits and wines, ameliorating...	William Thornton....	Washington, D. C..	Sept. 7, 1809
Spirits of turpentine and rosin, mode of manufacturing.....	Nicholas U. Chafee...	Charleston, S. C....	Mar. 14, 1846
Starch, elastic, clear, from wheat.	Elijah Perkins.....	Shrewsbury, N. J..	Sept. 16, 1810
Starch, potatoe.....	John Biddis.....	Pennsylvania.....	Mar. 22, 1802
Starch, rice.....	W. & T. Liversidge..	Dorchester, Mass..	Feb. 17, 1836
Starch, from wheat.....	Elisha Perkins.....	Shrewsbury, N. J..	Feb. 26, 1811
Starch, manufacture of†.....	Orlando Jones.....	City Road, Eng....	Mar. 12, 1841
Starch, machine for washing and pulverizing potatoes for.....	Sylvanus Richardson.	Jericho, N. Y.....	Jan. 9, 1838
Stone, artificial.....	Rob. McCay, Daniel McKenzie, and Jas. Woodhull.....	Caledonia, N. Y....	Jan. 16, 1828
Stone, artificial coffins.—See Class 22.			
Straw bonnets.—See Class 3.			
Straw flats and bonnets, machine for cleaning.....	Eleazer Smith.....	Franklin, Mass....	Mar. 30, 1808
Straw, whitening, Leghorn and gimp.....	Henrietta Cooper....	Washington t'p, Pa.	Nov. 12, 1828
Sugar boiler, circulating.....	Francis Hoard.....	Demerara, W. I....	May 30, 1838
Sugar boiler.....	William Graham.....	St. Charles, La....	Mar. 10, 1843
Sugar boilers.....	Abraham Hager.....	Donaldsonville, La.	Mar. 9, 1844
Sugar boilers.....	Francis Duplessis...	Plaquemines, La....	Dec. 16, 1845
Sugar, boiling, &c., under a vacuum	John Steel, jr.....	New York.....	Oct. 27, 1835
Sugar candy.....	H. & G. Garrison....	Newburgh, N. Y....	April 10, 1844
Sugar candy, making.....	Lawrence Astolfi....	Philadelphia, Pa....	Nov. 28, 1812
Sugar caking.....	Uriel Smith.....	Sandisfield, Mass..	Jan. 21, 1833
Sugar cane, machine for grinding.	John J. Breithler....	New Orleans, La....	June 13, 1818
Sugar, claying, moulds.....	Jona. Williams, jr....	Philadelphia, Pa....	Mar. 13, 1793
Sugar, cleaning.....	Joseph Hurd.....	Stoneham, Mass....	Oct. 3, 1844
Sugar, damper, furnace.....	Joshua Jordon.....	Boston, Mass.....	Dec. 27, 1833
Sugar, &c., filters for†.....	John Watson.....	Lancaster, Eng., now in Elizabethtown, New Jersey.....	Jan. 31, 1844
Sugar making.....	J. De Bretton, sen....	New Orleans, La....	May 24, 1845
Sugar making.....	Ethan Campbell.....	New York.....	Oct. 25, 1845
Sugar making||.....	Joa. Francois Lapice, assee of Chs. Louis Derosne.....	Paris, France.....	July 10, 1845
Sugar making, improvement in...	Norbert Rillieux.....	New Orleans, La....	Dec. 10, 1846
Sugar, making and refining.....	Antoine Boucherie...	Philadelphia, Pa....	Jan. 8, 1808
Sugar, making from wheat, rye, &c	James Wisheart.....	Wayne co., Ind....	May 25, 1819
Sugar, manufacturing.....	Henry Fry.....	Harrisburg, N. Y..	April 6, 1820
Sugar, manufacturing.....	William A. Archbald.	New York.....	Aug. 16, 1831
Sugar, manufacturing.....	Lemuel W. Wright..	London, Eng.....	Aug. 25, 1831
Sugar, manufacturing.....	Guy Duplantier.....	E. Baton Rouge, La.	Jan. 21, 1833
Sugar, manufacturing.....	John Penny.....	Parish Ascension, La	Sept. 25, 1837
Sugar, manufacturing from beets.	Joseph Hurd, jr.....	Boston, Mass.....	July 26, 1838
Sugar, manufacturing from cane juice.....	Eb. A. Lester.....	Boston, Mass.....	Sept. 10, 1829
Sugar, manufacturing from cane juice.....	Wm. A. Archbald....	New York.....	April 19, 1830
Sugar, manufacture of, from cane.	George Michiels.....	Guadaloupe.....	Oct. 3, 1846

* English patent, July 8, 1846.

† England, June 23, 1842.

† Antedated April 13, 1840.

|| Date of foreign patent, Oct. 27, 1835.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Sugar mill.— <i>See Class 13.</i>			
Sugar, moulds for loaf.....	Charles Duneau.....	Williamsburg, N. Y.	Oct. 27, 1835
Sugar, moulds for refining.....	Mervin Merrill.....	New York.....	Oct. 25, 1816
Sugar pan.....	Alfred Stillman.....	New York, N. Y....	May 16, 1846
Sugar, raw or brown, from the juice of the cane.....	William A. Archbald.	New York.....	April 19, 1830
Sugar, raw or brown, from the juice of the cane, &c., in wooden vessels.....	William A. Archbald.	New York.....	April 19, 1830
Sugar, refining.....	Bernard E. Verjon....	Washington, D. C..	April 26, 1816
Sugar, refining, double boiler and other apparatus.....	William A. Archbald.	New York.....	May 29, 1828
Sugar, refining, filtering apparatus	William A. Archbald.	New York.....	May 29, 1828
Sugar works.....	Sam'l V. Merrick and J. H. Towne, ass'ees of N. Riellieux.....	New Orleans, La....	Aug. 26, 1843
Sulphate of alumine, process of manufacturing.*	Rudolph Boninger and G. Boninger, ass'ees of Max. Jos. Funcke	Baltimore, Md....	Jan. 23, 1841
Sulphur, sublimating.....	George B. Dexter....	Eichelskamp, Prus }	Oct. 9, 1806
Sulphur, sublimating.....	George Robinson.....	Boston, Mass.....	Nov. 16, 1812
Sumach, extracting essence of.....	Elizabethtown, N. J.	New Hampshire....	Feb. 12, 1800
Sumach, manufacturing.....	Nathaniel Ladd.....	New London, Ct....	Feb. 28, 1793
Sumach, manufacturing.....	Roswell Saltonstall..	New London, Ct....	May 1, 1793
Sumach, manufacturing.....	Roswell Saltonstall..	Connecticut.....	May 12, 1796
Sumach, manufacturing.....	Jos. Hillard.....	Connecticut.....	April 7, 1800
Surgical operations.....	Comfort Hoyt, jr.....		
Syphilis, cure of.....	W. T. G. Morton, as'se of C. T. Jackson....	Boston, Mass.....	Jan. 26, 1816
Syphilis, &c., medicine for the cure of.....	Jos. Mosher.....	Philadelphia, Pa....	Nov. 12, 1846
Tallow, &c., cutting.....	Nicholas W. Badeau..	New York.....	Mar. 8, 1832
Tallow, pressure of elaine from.—	Zabina Ellis.....	Kingston, Pa.....	Oct. 12, 1844
Tallow, preparing for manufacture of candles.....	<i>See Press, Class 12.</i>		
Tallow, rendering.....	John Kirkman.....	New York.....	Oct. 31, 1840
Tallow, or stahrein, composition.	L. Montrop.....	Baltimore, Md....	June 27, 1842
Tannin, (improvement on De-	Carl G. Ritter.....	Cincinnati, Ohio...	Feb. 18, 1834
mond's mode of obtaining.....	John Giles.....	Guilford, Vt.....	April 11, 1825
Tannin, extracting.....	John Biddis and Thos. Bedwell.....	Philadelphia, Pa....	Aug. 10, 1791
Tannin, extracting.....	William Knapp.....	Milford, N. Y.....	April 5, 1823
Tannin, extracting.....	D. Roe, C. F. Kellogg, and J. W. Gazley...	Cincinnati, Ohio...	Oct. 3, 1823
Tannin, extracting.....	Augustus A. Hayes..	Roxbury, Mass....	July 12, 1838
Tannin, extracting by steam.....	William Coburn.....	Gardner, Me.....	Nov. 1, 1828
Tannin, extracting by water press	William Lowber.....	Philadelphia, Pa....	Mar. 15, 1825
Tanning.— <i>See Class 16.</i>			
Tansy, essence.....	Israel Newton.....	Norwich, Vt.....	Feb. 28, 1806
Tincture, for curing corns.....	Elisha Smith.....	N. Brunswick, N. J.	Jan. 20, 1826
Tobacco, preparing chfewing.....	Eben Goodwin.....	New York, N. Y....	Feb. 16, 1843
Tobacco, renovating.....	Enoch Huse.....	Newburyport, Mass.	July 22, 1844
Toothache, relieving by steam...	Lemuel Merritt and S. Rogers.....	New York.....	Dec. 27, 1815
Toothache, remedy.....	Jos. Uley.....		Nov. 5, 1817
Toothache, specific.....	Samuel Pennington..	Mount Pleasant, O.	July 30, 1823
Turpentine, extracting by steam..	Hez. Kelly.....	Brooklyn, N. Y....	May 17, 1816
Turpentine, spirits, extracting...	I. Jennings.....	New York.....	July 1, 1836
Turpentine, oil of, process of rectifying, which he calls camphine	Aug. V. H. Webb...	New York.....	Feb. 19, 1839
Varnish, for furniture.....	Marcus Curtis.....	Troy, N. Y.....	April 22, 1826
Varnish, gum elastic.....	Jac. F. Hummel.....	Philadelphia, Pa....	April 29, 1813
Varnish, for leather.....	John David.....	Philadelphia, Pa....	May 5, 1810
Vegetable elixir, for cure of bronchitis.....	Peter Faulkner.....	Rockville, Pa.....	Sept. 23, 1843

* Antedated Nov. 16, 1839.

† Antedated July 2, 1840.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WARR. ISSUED.
Vegetable extracts, making.....	Benjamin Brandreth..	New York, N. Y....	Jan. 20, 1808
Vegetable wash for the lungs	George Rogers.....	Northampton, Mass.	Dec. 31, 1808
Verdigris, manufacturing.....	George F. Hagner....	Philadelphia, Pa....	Oct. 13, 1817
Vermifuge, preparing.....	Jos. Lehman.....	Philadelphia, Pa....	Aug. 11, 1807
Vinegar and cider, from offals of distilleries.....	William Richardson..	Kingston, N. Y....	Sept. 26, 1816
Vinegar, manufacturing.....	Edward Clark.....	Saugerties, N. Y....	June 19, 1834
Vinegar, mode of making.....	Frederick N. Boden..	New Lancaster, Ohio	July 6, 1835
Vinous fermentation*.....	Charles C. Edday....	Benton, Miss.....	April 1, 1842
Vitriol, oil of.....	Rd. Marden.....	New York.....	Aug. 21, 1812
Vitriolic test for bank bills.....	Abel Brewster.....	Hartford, Ct.....	July 11, 1808
Washing machine, for distilleries..	Warham Whitney...	Rochester, N. Y....	Jan. 19, 1826
White and whiting, Paris.....	Peter Ferris	Greenwich, Ct.....	April 22, 1835
White lead, manufacturing.....	Smith Gardner.....	New York.....	Aug. 26, 1843
Wine, from cider.....	Henry Seabolt.....	Scipio, N. Y.....	Nov. 11, 1812
Wine, from cider.....	Ezra B. Corkings....	Bristol, N. Y.....	Oct. 8, 1813
Wine, from cider.....	Jacob Hugus.....	Hempfield, Pa.....	Dec. 1, 1832
Worms, specific for.....	Charles McLane.....	Morgantown, Pa....	Aug. 19, 1833

* Antedated March 4, 1842; additional improvement, Nov. 26, 1842.

CLASS No. V.

CALORIFIC.

**Comprising Lamps, Fire-places, Stoves, Grates, Furnaces for
heating Buildings, Cooking Apparatus,
Preparation of Fuel, &c.**

LIST OF PATENTS.

CLASS V.—CALORIFIC, comprising Lamps, Fire-places, Stoves, Grates, Furnaces for heating Buildings, Cooking Apparatus, Preparation of Fuel, &c.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Air back, for chimneys	Joel Root	Southington, Conn...	Feb. 13, 1819
Air draught, subignia	Samuel Randall	Providence, R. I.	Mar. 12, 1811
Air flue, descending	James Macomber	Greenwich, N. Y.	Nov. 19, 1811
Air heater, cylindrical	Charles Fowler	Hartford, Conn	July 10, 1839
Air, heating, for the hot blast in furnaces	Joseph Jones	York, Pa.	Dec. 10, 1838
Air, to wood and coal stoves*	Frederick A. Fickhardt	Easton, Pa.	Sept. 25, 1837
Asbestos, use and application of, to stoves, grates, crucibles, &c.	John Scott	Philadelphia, Pa.	Nov. 26, 1835
Baker, economical	Philip Wilcox	Springfield, Mass.	Feb. 18, 1829
Baker, metal	Josiah St. John	Hudson, N. Y.	Sept. 30, 1834
Baker, reflecting tin	William Prescott	Boston, Mass.	May 24, 1832
Baker, reflecting	L. B. Olmstead	Binghampton, N. Y.	Jan. 20, 1836
Baker, and roasting, double reflecting	Samuel Hasey	Rensselaerville, N.Y.	Dec. 28, 1832
Baker, and roaster, economical	Philip Wilcox	Springfield, Mass.	Sept. 28, 1831
Baker, steam	Philo F. Wilcox	Springfield, Mass.	Sept. 3, 1834
Baker, tin	Gordin Williston	New London, Conn.	Jan. 11, 1831
Bakers, tin	Nathaniel D. Whiten	New York	Oct. 10, 1835
Bakers†	John T. Davy	Troy, N. Y.	Feb. 12, 1845
Bakers	William Tainter & H. S. Orton	Porter co., Indiana	Aug. 9, 1845
Baking, and cooking.	Abel Stowell	Medford, Mass.	Dec. 14, 1830
Baking, iron	Elijah Skinner	Sandwich, N. H.	Oct. 1, 1830
Binnacle lights	Winslow Lewis	Boston, Mass.	June 24, 1808
Binnacle lights	Joseph F. Smith	Baltimore, Md.	June 1, 1825
Binnacle lights	William Lawrence	Meriden, Conn.	Nov. 14, 1832
Blower, coal grate	R. Fuller & T. Thomas	New York	May 22, 1827
Blower, spiral cone	Benjamin Brundred	Oldham, N. J.	Sept. 26, 1835
Boiler	Benjamin Platt	Connecticut	April 27, 1803
Boiler	Gab. N. Phillips	Goshen, N. Y.	June 28, 1814
Boiler, for anthracite coal	John Barker	Baltimore, Md.	Feb. 7, 1827
Boiler, box	John Morris	New Haven, Ct.	Oct. 3, 1812
Boiler, circular	Jona. Sizer	New London, Conn.	Oct. 15, 1811
Boiler, constructing	Jos. Hurd, jr.	Boston, Mass.	Nov. 10, 1829
Boiler, cylindrical	Philo M. Hackley	Hudson, N. Y.	Oct. 9, 1813
Boiler for heating liquids	Warren Nims	Fort Ann, N. Y.	Oct. 24, 1846
Boiler, or heater, pipe or grate	Samuel Bolton	Philadelphia, Pa.	July 7, 1809
Boilers for heating water, &c.	Daniel L. Pickard	Hartland, N. Y.	Oct. 14, 1841
Boiler, kitchen	J. and W. C. Bailey	Farmington, Me.	May 22, 1835
Boiler, portable	Anson W. Spencer	Cazenovia, N. Y.	June 19, 1835
Boiler, setting	Eben. Jenks	Portland, Maine	June 1, 1805
Boilers, steam for cooking and evaporators	{ Dudley Marvin	New York } N. Y.	Aug. 23, 1840
	{ Oran W. Seely	Sodus }	
Boiler or steamer, construction of	Salmon C. Riley	New York	Oct. 11, 1841
Boiler, steam, stoves, &c.	John James Giraud	Baltimore, Md.	Mar. 8, 1830
Boiler, stone.—See Class 4.			
Boiler, universal	Andrew Glendenning	Butler county, Pa.	Sept. 25, 1823
Boiler, upright stove	Thomas E. Barker	Greene co., N. Y.	Feb. 19, 1819
Boiling	Caleb Shepard	Cincinnati, N. Y.	Oct. 4, 1817
Boiling.—See Class 4.			
Boiling potatoes, &c.	Hosea E. Potter	Otsego, N. Y.	Nov. 20, 1810

* Antedated March 25, 1837.

† Antedated August 12, 1844.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Boiling water in vats or cisterns.	Jason L. Burdick	Norwich, N. Y. . . .	July 31, 1846
Burners, anthracite coal.	James N. Olney.	Providence, R. I. . . .	Dec. 26, 1833
Burner for pine-knots, &c.	John Price.	Nashville, Tenn. . . .	Dec. 18, 1839
Burners, water.	John L. Sullivan. . . .	Boston, Mass.	Dec. 11, 1818
Burners, water.	Samuel Morey.	Oxford, N. H.	Dec. 19, 1818
Cabooses.	George Youle.	New York.	Mar. 21, 1806
Cabooses.	George Youle.	New York.	July 27, 1809
Cabooses.	John Bouis.	Baltimore, Md.	Dec. 31, 1812
Cabooses, adapted to distil salt water.	Michael Rocher.	Nantes, France.	Aug. 28, 1841
Cabooses, for cooking.	John Youle.	New York.	Aug. 25, 1795
Cabooses, and cooking stove. . . .	George Youle.	New York.	April 1, 1807
Cabooses, for distilling fresh from salt water.	Simeon Rouse.	New York.	Jan. 1, 1803
Cabooses, iron.	William Ashbridge. . . .	Pennsylvania.	June 28, 1803
Cabooses, portable, kitchen, or stove.	James Truman.	Philadelphia, Pa. . . .	Dec. 3, 1811
Cabooses, or stove, for cooking or distilling.	George Youle.	New York.	May 21, 1806
Cabooses, ships'.	James Wilson.	New York.	Aug. 17, 1843
Cabooses, ships, and other working stoves.	Loftis Wood.	New York.	Nov. 26, 1840
Caldron and furnace combined. . .	Jordon L. Mott.	New York.	Dec. 1, 1840
Candlestick.	Benjamin Dearborn. . . .	Boston, Mass.	Oct. 29, 1804
Candlestick, holder, economical. .	Peter Ward and B. Allison.	Philadelphia, Pa. . . .	July 20, 1812
Candlestick, pewter.	Joshua Witherle.	Boston, Mass.	Oct. 24, 1817
Candlestick, improvement in. . . .	William Church.	Citizen United States, now in England. . . .	Mar. 28, 1840
Chandelier, of crystalized salt. . . .	Fred. B. Merrill.	Buffalo, N. Y.	June 13, 1829
Chandelier, or hanging lamp*. . . .	Wm. Lawrence.	Meriden, Conn.	Mar. 23, 1831
Charcoal burner, conical arch. . . .	Ezra B. Gilbert.	Euphrata, N. Y.	Nov. 7, 1835
Charcoal, for gunpowder.	Fielder Parker.	Pr. George's co., Md. . .	July 25, 1815
Charcoal, manufacturing.	Isaac Doolittle.	Bennington, Vt.	Dec. 14, 1829
Charcoal, from peat.	Charles Fales.	Worcester, Mass. . . .	Feb. 11, 1807
Chimneys.	Richard Stuart.	Maryland.	Feb. 24, 1797
Chimneys.	David Cooley and Gab. N. Philips.	New York.	Aug. 25, 1800
Chimneys.	Giles Gridley.	Newburyport, Mass. . .	Mar. 13, 1808
Chimneys.	Lewis Levesne.	Philadelphia, Pa. . . .	June 26, 1809
Chimneys.	A. G. D. Tuthill.	Utica, N. Y.	June 8, 1826
Chimney apparatus to prevent smoking.	Joseph Hurd, jr.	Stoneham, Mass. . . .	April 24, 1841
Chimneys, building, to prevent smoking.	Joseph Gilbert.	Frease's p. o., Ohio. . .	Nov. 13, 1844
Chimneys, cap for increasing the draught in furnaces.	James P. Espy.	Philadelphia, Pa. . . .	June 29, 1833
Chimneys, cap for preventing emission of sparks.	Edward A. G. Young. . . .	Newcastle, Del.	July 22, 1833
Chimneys, caps for regulating draught of.	Joseph Hurd.	Stoneham, Mass. . . .	Dec. 12, 1844
Chimney caps, constructing, &c. . .	Bernard Kenny.	Northfield, Mass. . . .	July 22, 1839
Chimney caps.	Jordon L. Mott.	New York, N. Y. . . .	Dec. 17, 1842
Chimney caps.	Jordan L. Mott, ass't of Thomas Ewbank. . .	New York, N. Y. . . .	Dec. 17, 1842
Chimneys, cast iron copings.	Charles Neer.	Waterford, N. Y. . . .	Sept. 11, 1829
Chimneys, cleaning.	John Bruff.	Baltimore, Md.	Dec. 16, 1814
Chimneys, cleaning.	Samuel Dow.	Elizabethboro', N. J. . .	June 11, 1829
Chimneys, cleaning.	Thomas Hinkley.	Hallowell, Maine. . . .	Oct. 7, 1831
Chimneys, cleaning.	James Slaughter.	Strasburg, Pa.	Nov. 4, 1846
Chimneys, constructing.	Oliver Richardson.	Medway, Mass.	April 18, 1810
Chimneys, constructing.	Henry Antes.	Harrisburg, Pa.	Oct. 24, 1831
Chimney cowls†.	Stephen M. Allen.	Boston, Mass.	April 21, 1842
Chimney cowls.	Palmer Sumner.	New York, N. Y. . . .	Feb. 20, 1842

* Released March 16, 1894.

† Additional improvement July 12, 1842.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	GIVEN FOR.
Chimneys, crank and wheel dampers for.	Jas. Reilly and John Flannagan	Waynesborough, Pa.	Mar. 10, 1827
Chimneys, cure for smoky	Augustus Haman	Washington, D. C.	July 22, 1845
Chimneys, cure for smoky	John Plant	Washington, D. C.	Nov. 21, 1845
Chimneys, draught, regulating valve, for.	John Baker	Lancaster, Pa.	Oct. 28, 1831
Chimneys, draught in	Elijah Skinner	Sandwich, N. H.	April 3, 1834
Chimney, draught of.	George H. Crosby	New Haven, Ohio	Jan. 28, 1840
Chimneys, for the draught of.	Archibald Wieting	Middletown, Pa.	Dec. 16, 1844
Chimneys and fire places.	Adam Spohn	Comrio, Pa.	Sept. 22, 1814
Chimneys and fire places.	Eben Rand	Hudson, N. Y.	Mar. 27, 1816
Chimneys and fire places.	Obed Delano	Utica, N. Y.	Feb. 3, 1821
Chimneys and fire places.	Lewis Kingsbury	Lavonia, N. Y.	Feb. 9, 1825
Chimneys and fire places.	Moses Perin	Connorsville, Ind.	Sept. 26, 1835
Chimneys, ovens, &c.	Elihu Smith	Ithaca, N. Y.	July 1, 1836
Chimneys, preventing smoking.	Frederick Crey	Baltimore, Md.	Oct. 8, 1821
Chimneys, preventing smoking.	Samuel Chase	Williamsport, Pa.	July 26, 1824
Chimneys, preventing smoking.	A. H. Read	Montrose, Pa.	April 3, 1829
Chimneys, preventing smoking.	Levi Silliman	Albany, N. Y.	July 20, 1831
Chimneys, preventing smoking, & extinguishing them.	J. Sullivan	Washington, D. C.	April 27, 1832
Chimneys, preventing smoky.	David Bain	Baltimore, Md.	Feb. 5, 1833
Chimneys, preventing smoky.	Henry Pollock	Baltimore, Md.	Mar. 11, 1834
Chimneys, preventing smoky.	Urban B. A. Lange	Philadelphia, Pa.	Oct. 14, 1834
Chimneys, protecting against water.	John J. Thomas	Charleston, S. C.	Oct. 2, 1804
Chimneys, scraper.	Matthew Benson	Cincinnati, Ohio	May 15, 1823
Chimneys, stoves, and fire places.	Louis D. Detroitment	New York	April 5, 1817
Chimneys, sweeping.	John Hunt	Baltimore, Md.	July 12, 1817
Chimneys, sweeping.	Francis A. Everard	New York	May 28, 1818
Chimneys, sweeping.	Aaron Lane	New York	Sept. 22, 1818
Chimneys, sweeping.	William Hall	New York	Dec. 19, 1818
Chimneys, sweeping.	Samuel S. Edmonson	New York	Nov. 8, 1820
Chimneys, sweeping.	John W. Moore	Washington, D. C.	Aug. 8, 1821
Chimney tops, improvement in.	William S. Burch	Washington, D. C.	July 14, 1846
Chimneys, ventiduct, topping.	Joshua Ennis	Brooklyn, N. Y.	Oct. 1, 1830
Cieter, boiling.	Timothy Kirk	Pennsylvania.	Dec. 20, 1802
Coal, anthracite, cracking.	Jonathan S. Hubbel	New York	Aug. 17, 1835
Coal, anthracite, combustion of.	Paul Chase	New York	Oct. 7, 1831
Coal, anthracite, combustion of.	Phineas Davis	Baltimore, Md.	July 23, 1824
Coal, breaking and screening*.	Joseph Battin	Philadelphia, Pa.	Oct. 6, 1843
Coal, breaking and screening.	Hopkins Thomas	Beaver Meadow, Pa.	Dec. 5, 1843
Coal, breaking.	Joseph Battin	Philadelphia, Pa.	Feb. 12, 1844
Coal, mode of conveying.	John G. Brant	Cumberland, Md.	Mar. 14, 1846
Coal sifters.	Horace Wells	Hartford, Conn.	Dec. 31, 1839
Coal sifters.	John P. Doane and William H. Denny	New York, N. Y.	Nov. 28, 1842
Coal sifter, revolving.	Thomas Borbridge and Anson Martin	Ringston t'nehip, Pa.	Dec. 30, 1826
Coffee extractor.	Lewis Martelly	New York	Sept. 30, 1825
Coffee roaster.	Peregrine Williamson	Baltimore, Md.	Mar. 20, 1820
Coffee roaster.	Peregrine Williamson	Baltimore, Md.	June 18, 1825
Coffee roaster.	Amos Ransom	Hartford, Conn.	Dec. 31, 1833
Coffee roaster.	Abel Stillman	Poland, N. Y.	Dec. 28, 1840
Coke, from anthracite.	Moses Isaacs	Philadelphia, Pa.	April 7, 1831
Cooking apparatus.	John Morris	New Haven, Conn.	Oct. 3, 1812
Cooking apparatus.	David Westerfield	New York	Mar. 24, 1827
Cooking apparatus.	Ez. Bennett	Kingsbury, N. Y.	Feb. 15, 1828
Cooking, apparatus for.	Joshua Grime	Beekmantown, N. Y.	Dec. 28, 1840
Cooking apparatus.	Joseph Jennings	New York	May 14, 1830
Cooking apparatus.	Samuel D. Day and William T. Day	Westfield, Mass.	June 8, 1832
Cooking apparatus.	James Bennet	Brutus, N. Y.	July 25, 1832
Cooking apparatus.	William W. Parrott	Boston, Mass.	Mar. 11, 1837
Cooking apparatus, and boiling.	Thomas K. Anderson	Boston, Mass.	Mar. 22, 1833

* Additional improvement, Jan. 20, 1844.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Cooking apparatus, and house warmer	Richard Johnson.....	Baltimore, Md.....	Nov. 19, 1833
Cooking apparatus, steam	John Bouis.....	Baltimore, Md.....	Jan. 6, 1812
Cooking, applying heat.....	Peter E. Sanburn.....	Troy, N. Y.....	June 11, 1829
Cooking, applying the reflection of caloric	John Burch.....	Jefferson co., N. Y.....	April 22, 1835
Cooking, and boiling.....	Thomas Passmore.....	Philadelphia, Pa.....	Dec. 23, 1796
Cooking, fire apparatus for.....	Daniel Stephens.....	Kitland, Ohio.....	Oct. 18, 1837
Cooking, fixtures for anthracite coal	Jac. F. Walters.....	Philadelphia, Pa.....	June 8, 1827
Cooking, generating steam for.....	Hardin Branch.....	New York.....	April 12, 1833
Cooking, generating steam for.....	John Bouis.....	Baltimore, Md.....	Sept. 21, 1837
Cooking machine.....	Frederick Butler.....	Connecticut.....	Aug. 22, 1800
Cooking machine.....	John J. Hess.....	Philadelphia, Pa.....	Mar. 19, 1829
Cooking machine, for families.....	John Seger.....	New York.....	Nov. 14, 1815
Cooking machine, portable.....	David Asher.....	Philadelphia, Pa.....	Feb. 18, 1825
Cooking, ranges.....	Thomas B. Smith.....	New York.....	Aug. 27, 1835
Cooking, steam vessel for.....	John Morris.....	Derby, Conn.....	Oct. 28, 1837
Drum.—See Class 2.			
Drums for heating apartments.....	William Frazier.....	Brooklyn, N. Y.....	April 30, 1810
Drying flour.....	John Ballantine and Adam Clark.....	Zanesville, Ohio.....	Mar. 4, 1839
	Richard Elae.....	Middlesex co., Engl.....	Aug. 14, 1839
Drying grain.....			
Extinguisher, and chimney regulator.....	Daniel Shoemaker.....	Philadelphia, Pa.....	Mar. 27, 1812
Extinguisher, and chimney sweeper	Ephraim Paine.....	Philadelphia, Pa.....	Dec. 11, 1817
Extinguisher, fire and chimney.....	Daniel Berrien.....	Philadelphia, Pa.....	Aug. 21, 1823
Fenders, fire.....	Elisha Ruggles.....	Rochester, N. Y.....	Feb. 27, 1821
Fenders, for fire places*.....	Elijah Skinner.....	Sandwich, N. H.....	April 19, 1822
Fenders, for fire places.....	Matthew Benson.....	Cincinnati, Ohio.....	May 19, 1823
Fenders, fire shaping.....	Thomas Thomas and Robert Fuller.....	New York.....	Nov. 19, 1832
Fire, alarm.....	James Dinamore.....	Milburn, Maine.....	May 14, 1833
Fire, alarm.....	B. Seymour and J. Whipple.....	Utica, N. Y.....	April 2, 1835
Fire, alarm, self-acting.....	Ithiel S. Richardson.....	New Market, N. H.....	Aug. 15, 1831
Fire, cavern.....	Abraham Quincy.....	Boston, Mass.....	Mar. 20, 1811
Fire, draught.....	Robert Mayo.....	Washington, D. C.....	Sept. 9, 1835
Fire, extinguishing.....	Benjamin Taylor.....	New York.....	Mar. 31, 1794
Fire, extinguishing.....	Samuel P. Lord, jr.....	Connecticut.....	Mar. 10, 1804
Fire, extinguishing.....	Isaac Clowes.....	Norfolk, Va.....	July 2, 1836
Fire fenders.....	Morgan Morgan, jr.....	New York, N. Y.....	July 22, 1844
Fire, hearth, range, or galley.....	George Youle.....	New York.....	Mar. 19, 1819
Firemen, machine for protecting.....	Ralph Bulkley.....	New York.....	Mar. 29, 1821
Fire-place.....	Charles W. Peale.....	Pennsylvania.....	Nov. 16, 1797
Fire-place.....	Giles Gridley.....	Newburyport, Mass.....	Feb. 14, 1808
Fire-place.....	Ebenezer Whiting.....	Gr. Barrington, Mass.....	June 18, 1810
Fire-place.....	Charles E. Cooper.....	Albany, N. Y.....	June 27, 1810
Fire-place.....	Peter Sternberg.....	Montgomery co. N. Y.....	Mar. 20, 1811
Fire-place.....	Peter Sternberg.....	Montgomery co. N. Y.....	Oct. 28, 1811
Fire-place.....	Peter Sternberg.....	Montgomery co. N. Y.....	Nov. 19, 1811
Fire-place.....	David F. Lanny.....	Philadelphia, Pa.....	Mar. 18, 1813
Fire-place.....	Levi Shephard.....	Northampton, Mass.....	Jan. 25, 1817
Fire-place.....	William Salisbury.....	Derby, Vt.....	Aug. 16, 1817
Fire-place.....	Eben Jenks.....	Colebrook, Conn.....	Sept. 2, 1818
Fire-place.....	Eliphalet Nott.....	Schenectady, N. Y.....	Feb. 3, 1819
Fire-place.....	Elizah Griffiths.....	Philadelphia, Pa.....	Mar. 6, 1820
Fire-place.....	William Shuneman.....	Catskill, N. Y.....	Aug. 8, 1821
Fire-place.....	Joseph Magini.....	Baltimore, Md.....	Feb. 4, 1822
Fire-place.....	Stephen Spalding.....	Colchester, Conn.....	April 11, 1822
Fire-place.....	William Hoyt.....	Brookville, Ind.....	June 3, 1825
Fire-place.....	Ebenezer Lester.....	Killingsworth, Conn.....	June 21, 1830
Fire-place.....	Horace Saxton.....	Eden, N. Y.....	July 8, 1834
Fire place.....	Bean and Skinner.....	Sandwich, Conn.....	June 12, 1835
Fire-place.....	Ebenezer S. Greely.....	Dover, Maine.....	Oct. 6, 1835

* Reissued March 12, 1836.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Fire-place	William Burgess.....	Middleboro', Mass..	Mar. 12, 1836
Fire-place	William R. Prescott..	Hallowell, Maine...	Mar. 19, 1836
Fire-place	Reuben Buck.....	Acton, Maine.....	July 1, 1836
Fire-places	Daniel Hemingway...	Leesburg, Ky.....	Nov. 9, 1844
Fire-place	Sarah Hammond.....	Baltimore, Md.....	June 25, 1839
Fire-place, and andirons.....	John Sweet.....	Berkshire, Mass....	Feb. 26, 1811
Fire-place, building and altering, for burning coal.....	Artemas Terrell.....	Boston, Mass.....	Oct. 25, 1832
Fire-place, cast iron.....	Ansel Hayward.....	Easton, Mass.....	Sept. 25, 1834
Fire-place, and chimney.....	Samuel Morey.....	Philadelphia, Pa....	Jan. 18, 1813
Fire-place, chimney.....	John C. Brush.....	Washington, D. C..	Jan. 28, 1814
Fire-place, and chimney.....	Cyrus Blood.....	Washington, Md....	April 7, 1825
Fire-place, and chimney.....	Reuben Bacon and Eli- jah Harris.....	Boston, Mass.....	April 8, 1835
Fire-place, and chimney, funneled	Ansel Gerriah.....	Shapleigh, Maine...	Jan. 23, 1835
Fire-place, and chimney stack in buildings.....	Henry R. Sawyer....	New York, N. Y....	Mar. 26, 1841
Fire-place to prevent smoking...	Homer Roberts.....	Delhi, N. Y.....	April 30, 1840
Fire-place, and chimney, stoves, &c., for burning coal.....	Ormsby M. Mitchell..	Cincinnati, Ohio....	Mar. 8, 1834
Fire-place, close.....	Horatio G. Spafford..	Hudson, N. Y.....	May 3, 1805
Fire-place, close, and open.....	John C. Brush.....	Washington, D. C..	Aug. 19, 1810
Fire-place, Columbia.....	Robert Hetterick....	Winchester, Va....	June 30, 1803
Fire-place, cooking and baking...	John C. Howard.....	Howard's Valley, Ct.	Oct. 27, 1835
Fire-place, defiance	Erastus Bartholomew and W. Church....	Boston, Mass.....	Aug. 19, 1815
Fire-place, double draught.....	Talmadge Ross.....	New Jersey.....	Jan. 23, 1804
Fire-place, doric.....	John Pierpont.....	Boston, Mass.....	Jan. 8, 1830
Fire-place, with flat funnel.....	Abraham Fisher.....	Hudson, N. Y.....	Feb. 19, 1837
Fire-place, fluted back.....	Eli Mix.....	New Haven, Conn..	April 25, 1812
Fire-place, for grates.....	Joseph Snyder.....	Philadelphia, Pa....	June 12, 1835
Fire-place, and grate.....	Charles Lane.....	Hingham, Mass.....	Dec. 15, 1835
Fire-place, and grate, open.....	Roger M. Sherman....	Fairfield, Conn....	June 30, 1837
Fire-place, grated.....	Augustus Graham....	Fredericktown, Md.	Nov. 24, 1810
Fire-place, and oven.....	Jonathan Knight....	Stoddard, N. H....	Dec. 15, 1831
Fire-place, parlor and kitchen...	John Hagerty.....	Monroe, Mich.....	Mar. 24, 1838
Fire-place, sheet iron.....	Joseph Ingalls.....	Sanbornton, N. H..	May 23, 1833
Fire-place, sheet iron.....	Levi Mansfield.....	New Hartford, N. Y.	May 29, 1833
Fire-place, sheet iron.....	Gilbert Richards....	Ashfield, Mass.....	Nov. 26, 1835
Fire-place, steam.....	John W. Cochran....	Lowell, Mass.....	July 18, 1834
Fire-place, stop.....	Elisha Putnam.....	New York.....	Aug. 24, 1802
Fire-place, and stoves.....	Allen Pollock.....	Boston, Mass.....	April 23, 1807
Fire-place, and stoves.....	Ezra Haskell.....	New London, Conn.	June 25, 1818
Fire-place, and stoves.....	Chauncey Guernsey..	Poultney, Vt.....	July 7, 1818
Fire-place, or stoves.....	John E. Cayford....	Milburn, Maine....	Dec. 31, 1833
Fire-place, or stoves.....	Elias W. Newton....	Middletown, Ct....	Dec. 3, 1834
Fire-place, or stoves.....	Foster Stevens.....	Springfield, Mass..	Mar. 2, 1836
Fire-place, and warming buildings	James Cox.....	Philadelphia, Pa....	May 2, 1834
Flues, chimney, dampers or valves for.....	Norman Smith.....	Hartford Conn....	Jan. 25, 1841
Flue contractors or chimney valves for fire-places and grates.....	Henry Batchelder....	Beverly, Mass.....	Jan. 8, 1842
Flues of cooking stoves.....	Ebenezer Ferren.....	Haverhill, N. H....	Nov. 12, 1839
Flues of cooking stoves, arranging and governing the draught in...	Charles Guild.....	Cincinnati, Ohio....	June 20, 1840
Flues of cooking ranges.....	Ebenezer Barrows....	Boston, Mass.....	Dec. 31, 1839
Flues of elevated ovens, combined with cooking stoves.....	Rensselaer D. Granger Class 2.	Albany, N. Y.....	Oct. 11, 1841
Flues of furnaces.—See Furnaces, Flue, furnaces, &c., machine for creating draught in.....	Thaddeus Fairbanks..	St. Johnsbury, Vt..	May 26, 1843
Flues, &c., of kitchen ranges.....	Samuel Pierce.....	New York.....	Feb. 21, 1838
Flues, of open fire-places.....	Thomas Whitson....	New York city.....	June 14, 1838

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCES.	DATE.
Flues of stove pipes, ornamented slides for covering.....	Perry Davis.....	Fall River, Mass....	Aug. 4, 1841
Flues of stoves.....	Linus North.....	Palmyra, N. Y.....	Oct. 31, 1839
Flues of stoves.....	Micah Ketcham and William A. Wheeler.....	Boston, Mass.....	Nov. 25, 1839
Fuel, burning.....	Thomas Pearson.....	Monroe W'ks, N. Y.	July 17, 1837
Fuel, composition for.....	John Allen.....	New York city.....	Mar. 17, 1838
Fuel, drying, for glass furnaces....	James Lee.....	Philadelphia, Pa....	Jan. 14, 1811
Fuel, preparing, and stoves to use therewith.....	Thomas Joyce.....	Camberwell, England	Nov. 12, 1838
Fuel, rosin, pine for.....	Richard L. Wood....	Philadelphia, Pa....	Oct. 10, 1838
Fuel, saving.....	Zini Phinney.....	Cairo, N. Y.....	Oct. 31, 1812
Fuel, saw dust, drying.....	William Avery.....	Syracuse, N. Y.....	Oct. 11, 1836
Fumiductor.....	William A. Barron....	New York.....	Sept. 10, 1812
Furnaces, air-heating.....	Jephtha Bradley.....	St. Albans, N. Y....	June 24, 1844
Furnaces, air-heating.....	John Barker.....	Baltimore, Md.....	July 7, 1846
Furnaces, air-heating.....	Ebenezer Barrow....	New York.....	Dec. 11, 1845
Furnaces, air, for stone coal.....	Thomas Gregg.....	Connellsville, Pa....	Mar. 16, 1814
Furnaces, adjustment of.....	Eliphalet Nott.....	Schenectady, N. Y.	April 22, 1836
Furnaces, for anthracite coal.....	William Church.....	Boston, Mass.....	Nov. 20, 1836
Furnaces, for anthracite, &c.....	Oliver Woodruff....	New York.....	Nov. 7, 1835
Furnaces, for anthracite, &c.....	John L. Sullivan....	New York.....	Nov. 26, 1835
Furnaces, for anthracite, &c.....	William Barrett....	Malden, Mass.....	Nov. 19, 1833
Furnaces, for anthracite*.....	Denison Olmstead....	New Haven, Conn....	Nov. 5, 1834
Furnaces, for anthracite.....	M. Brook Bulkley....	Pottsville, Pa.....	Jan. 16, 1836
Furnaces, and bake oven.....	Charles E. Russell....	Philadelphia, Pa....	Feb. 13, 1835
Furnace, baker's.....	Gardner Chilson....	Boston, Mass.....	June 10, 1840
Furnace, boiler or burner.....	Ezra L. Miller.....	Brooklyn, N. Y....	July 7, 1846
Furnaces, and boiler, combined..	Philo M. Hackley....	Herkimer, N. Y....	Jan. 23, 1815
Furnaces, and boiler, combined..	Alexander Harrison..	New Haven, Conn....	Mar. 2, 1836
Furnaces, cooking, portable.....	Leonidas V. Badger..	Dover, N. H.....	Jan. 30, 1839
Furnaces, cooking, portable.....	Asahel Cross.....	Cazenovia, N. Y....	May 12, 1839
Furnaces, cooking, portable.....	William Haggerty, C. Lawrence, and Thomas Frazier.....	New York.....	May 22, 1839
Furnaces, cooking.....	Horace Gleason.....	Boston, Mass.....	Dec. 15, 1837
Furnaces, cooking, and air-heating	Otis Packard.....	Foxborough, Mass..	May 26, 1842
Furnaces, or economical stove....	Jo. Pendrell.....	New York.....	April 6, 1808
Furnace, economizing fuel and consuming smoke.....	Frederick P. Dimpfel..	New York, N. Y....	May 9, 1839
Furnaces, evaporating for salt work	James Colquhoun....	Charlestown, Va....	Feb. 6, 1834
Furnaces, and fire-place.....	Peter Tomkinson....	Derby, Conn.....	Mar. 7, 1815
Furnaces, and fire-place.....	J. W. Boot & W. Lynn	Boston, Mass.....	Dec. 29, 1836
Furnaces, fire-proof, for distilleries	John Miller.....	Northampton, Pa....	Mar. 11, 1823
Furnaces, with fossil coal.....	Daniel Stansbury....	Bellville, N. J....	April 15, 1835
Furnaces, friction, for generating heat.....	John M. Cochran....	Lowell, Mass.....	Nov. 19, 1838
Furnaces, to generate steam for culinary purposes.....	Jesse Reed.....	Marshfield, Mass....	Jan. 5, 1831
Furnaces, grate bars of.....	John Kymer.....	Caermarthen, South Wales, England..	July 19, 1844
Furnaces, heating buildings†.....	Gurdon Fox.....	Hartford, Conn.....	Mar. 10, 1843
Furnaces, heating buildings.....	George Walker.....	New Haven, Conn....	June 10, 1844
Furnace for heating and warming apartments.....	John A. Page.....	Boston, Mass.....	Sept. 25, 1841
Furnace, hot air and fire grates for heating apartments.....	William H. Whiteley..	Charlestown, Mass..	May 11, 1841
Furnaces, heated air to.....	John Silebo.....	Tyrone, N. Y.....	Aug. 8, 1837
Furnaces, for heating ovens.....	Abraham H. Quincy..	Boston, Mass.....	Feb. 17, 1812
Furnaces, hot air, and bake oven..	Jacob Stahl.....	Baltimore, Md.....	May 29, 1832
Furnaces, hot air.....	John Bouis.....	Baltimore, Md.....	Mar. 29, 1834
Furnaces, hot air.....	Gardner Chilson....	Boston, Mass.....	Aug. 4, 1845
Furnaces, hot air.....	Adrian James.....	New York.....	Aug. 9, 1845
Furnaces, hot air.....	William G. Wing....	New Bedford, Mass..	May 23, 1846

* Reissued October 14, 1835. † Antedated February 17, 1843, see letter book. ‡ Antedated Feb. 4, 1845.

INVENTORS OR DISCOVERERS.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Furnace, hot air, for heating buildings.....	Joseph R. Morris....	New Haven, Conn..	Aug. 12, 1846
Furnace, hot water, for warming buildings.....	Ezra L. Miller.....	Brooklyn, N. Y....	July 7, 1846
Furnaces, making.....	George W. Robinson..	Attleborough, Mass.	Aug. 19, 1822
Furnaces, pot and pearl.....	Edward Ryan.....	Pennsylvania.....	April 29, 1793
Furnaces, portable.....	John Lewis.....	Derby, Conn.....	July 8, 1834
Furnaces, portable.....	Jordan L. Mott.....	New York city.....	Oct. 19, 1838
Furnace, portable, for heating in bathing tubs.....	Rudolph Densmore...	Hopewell, N. Y....	Nov. 26, 1840
Furnaces, portable.....	George E. Waring...	Stamford, Conn....	Mar. 16, 1844
Furnaces, portable hot air.....	H. L. B. Lewis.....	New York.....	Sept. 19, 1845
Furnace, smelting iron.—See Class 2.			
Furnaces of steam boilers, &c.—See Class 6.			
Furnace, summer, design for.....	William P. Cresson..	Philadelphia, Pa....	May 23, 1846
Furnaces, with reflectors.....	John Hurd, jr.....	Boston, Mass.....	Nov. 10, 1829
Furnaces, steam, for anthracite...	Benjamin B. Howell..	Philadelphia, Pa....	Oct. 14, 1828
Furnaces, for stone or charcoal...	John Eslin.....	Philadelphia, Pa....	June 19, 1830
Furnaces, of stoves.....	Eben Eaton.....	Troy, N. Y.....	Jan. 20, 1838
Furnaces, stoves, &c., constructing	Social Ralph.....	Wailes, N. Y.....	Nov. 8, 1826
Furnaces, for tailors.....	Asher W. Roberts...	Hartford, Conn....	May 28, 1830
Furnaces, for warming buildings...	F. A. Fickhardt.....	Easton, Pa.....	Sept. 8, 1836
Galley, ships', for the distillation of salt water.....	Enoch Hutchinson...	Baltimore, Md.....	May 20, 1839
Gas burner.....	Antoine Arnoux.....	New York city.....	June 4, 1838
Gas burner.....	William Black.....	Boston, Mass.....	Aug. 9, 1845
Gas burner.....	Joseph Battin.....	Philadelphia, Pa....	June 6, 1846
Gas burners, argand.....	Geo. Daricott and Joseph Nason.....	Boston, Mass.....	July 26, 1839
Gas burners, improvement in*...	Etienne Maccaud.....	Echallens, Switzerl'd	Dec. 28, 1846
Girandoles, design for.....	Wm. N. Hooper and Co., ass'ee of Wm. Blake.....	Boston, Mass.....	Mar. 17, 1843
Grates.....	Charles Hunt.....	New York.....	Mar. 17, 1812
Grates.....	Charles M. Graham...	New York.....	Nov. 10, 1821
Grates.....	James Atwater.....	New Haven, Ct....	Oct. 25, 1839
Grates.....	James Atwater.....	New Haven, Ct....	Jan. 9, 1833
Grates.....	Barnabas Pike.....	New York.....	Mar. 11, 1835
Grates.....	James Bennett.....	New York.....	May 14, 1836
Grate.....	John Goldenburgh...	Cincinnati, Ohio...	Oct. 7, 1846
Grate bars.....	William Ferrall.....	Charleston, S. C....	April 25, 1843
Grates, and blower, for Lehigh coal.....	S. C. Mott and W. Holmes.....	New York.....	Nov. 26, 1826
Grates, cooking.....	Thomas Vinton.....	Philadelphia, Pa....	Oct. 31, 1829
Grates, cooking.....	John James Giraud...	Baltimore, Md.....	Feb. 10, 1836
Grates, design for.....	Adam Hampton.....	New York.....	May 17, 1844
Grates, and fire-place, for anthracite coal.....	Wm. M. Russell.....	Boston, Mass.....	Feb. 8, 1833
Grates, and fire place.....	Ellison Conger.....	Newark, N. J.....	July 22, 1837
Grate, fire place, design for.....	W. & N. H. Jackson.	New York, N. Y....	Jan. 7, 1846
Grate, fire place, design for.....	Adam Hampton.....	New York, N. Y....	Jan. 10, 1846
Grate, fire place, design for.....	Adam Hampton.....	New York, N. Y....	July 25, 1846
Grates, hatters', &c.—See Class 3.			
Grates, kitchen.....	Levi Disbrow.....	New York.....	Nov. 22, 1830
Grates of lime kilns.....	William B. Hill.....	Bellevue, Mich.....	July 30, 1841
Grates of stoves, constructing...	Gardner Chilson.....	Boston, Mass.....	Sept. 11, 1841
Grates, open.....	James Easterly.....	Troy, N. Y.....	May 16, 1842
Grates, open, for burning coals...	James Atwater.....	New Haven, Ct....	Nov. 9, 1838
Grates, parlor.....	William Anderson.....	New York.....	June 25, 1836
Grates, parlor.....	James Wilson.....	New York.....	Sept. 13, 1845
Grates, pendulum.....	Nathan Winslow.....	Portland, Me.....	July 2, 1836
Grates, portable.....	James Williamson.....	Washington, D. C..	Nov. 8, 1836
Grates, register and air box for...	Allen Pollock.....	Boston, Mass.....	Mar. 3, 1837
Grates, reverberating.....	Robert Mayo.....	Richmond, Va.....	Nov. 1, 1825

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	DATE, MONTH, YEAR.
Grates, revolving and shifting....	Enos B. M. Hughes..	New Haven, Ct.....	July 29, 1837
Grates, sliding.....	John C. Howard.....	Hampton, Ct.....	Feb. 13, 1836
Grates, sliding, flute.....	Daniel Deamond.....	New York city.....	Dec. 26, 1837
Grates and stoves.....	Edward H. Dixon.....	New York city.....	Aug. 8, 1837
Grates, stoves, and furnaces.....	Elias W. Newton.....	Middletown, Ct.....	Jan. 9, 1835
Grates, in stoves, lowering and raising.....	Josiah Dutcher.....	New York city.....	June 30, 1838
Grates, and stoves, parlor & kitchen	Elkanah Ingalls.....	Providence, R. I.....	April 22, 1835
Grates, union.....	James Wilson.....	New York.....	Sept. 12, 1834
Gridirons.....	Daniel Ball.....	Ballstown, N. Y.....	Aug. 29, 1822
Gridirons.....	Jona. Powers.....	Lansingburg, N. Y.....	Aug. 10, 1829
Gridirons.....	Ami Clark.....	Berlin, Ct.....	July 21, 1834
Gridirons.....	Fenner Bush & Linus Pratt.....	Meriden, Ct.....	July 21, 1832
Gridirons.....	Joseph Hawkins.....	W. Windsor, N. Y.....	Mar. 26, 1845
Gridirons, constructing.....	Isaac Damon.....	Northampton, Mass.....	Jan. 30, 1841
Gridirons, guttered.....	Thomas Mussey.....	New London, Ct.....	Mar. 6, 1820
Gridirons, rotary.....	Kellogg Strong.....	Mendon, Ct.....	Oct. 28, 1835
Gridirons, and spider.....	A. & George Sizer.....	Meriden, Ct.....	Nov. 14, 1836
Hatters' kettles.....	Russell Wildman.....	Hartford, Ct.....	Nov. 8, 1845
Hearths, fire, for ships.....	John Lamb.....	Amboy, N. J.....	Mar. 18, 1820
Heat, abstracting from smoke by basket grates.....	Daniel Steinhauer.....	Philadelphia, Pa.....	Dec. 13, 1832
Heat, applying and conducting apparatus for.....	John C. Douglass.....	New York.....	Dec. 23, 1834
Heat, applying, to fluids.....	S. Applegate, T. Howard & P. H. Wharton	Philadelphia, Pa.....	Nov. 22, 1809
Heat, applying, from lime.....	Peter Wenn.....	Philadelphia, Pa.....	Mar. 8, 1836
Heat, collecting and retaining in stoves.....	William Phœbus.....	New York.....	Nov. 28, 1817
Heat, evolution and management of.....	Eliphalet Nott.....	Schenectady, N. Y.....	Mar. 23, 1826
Heat, evolution & management of.....	Eliphalet Nott.....	Schenectady, N. Y.....	June 21, 1826
Heat, evolution & management of.....	Eliphalet Nott.....	Schenectady, N. Y.....	Dec. 29, 1826
Heat, evolution & management of.....	Eliphalet Nott.....	Schenectady, N. Y.....	May 30, 1827
Heat, evolution & management of.....	Eliphalet Nott.....	Schenectady, N. Y.....	Mar. 26, 1828
Heat, evolution & management of.....	Lovell Lewis.....	Lewistown, N. Y.....	Mar. 2, 1836
Heat, evolution & management of.....	Eliphalet Nott.....	Schenectady, N. Y.....	June 29, 1833
Heat, generating, by hydrogen gas.....	Lewis A. Hall.....	Newark, N. J.....	June 3, 1843
Heat, produced by the management of combustion.....	Keene A. Bille.....	New York.....	Nov. 8, 1828
Heat, regulating by machinery.....	Lemuel W. Wright.....	London, Eng.....	Aug. 25, 1831
Heat, retainer and imparter.....	John R. Mitchell.....	Philadelphia, Pa.....	Nov. 19, 1818
Heat, transmitting by circulation of hot air, apparatus for. ||	Angier M. Perkins.....	Citizen U. S., now in London.....	Sept. 4, 1840
Heating air, for warming houses.	J. W. & Eli Kirk.....	Philadelphia, Pa.....	Aug. 30, 1833
Heating buildings.....	Angier M. Perkins.....	Now in London.....	Aug. 20, 1838
Heating and boiling water.....	George J. Payne.....	Lockport, N. Y.....	Dec. 27, 1826
Heating buildings, apparatus for.	George M. Dexter.....	Boston, Mass.....	Dec. 1, 1840
Heating buildings.....	Reuben Mitchell.....	Portland, Me.....	April 11, 1842
Heating buildings, apparatus for.	Otis Packard.....	Roxbury, Mass.....	Mar. 9, 1842
Heating carriages.....	Alex'r McWilliams.....	Washington, D. C.....	Nov. 29, 1833
Heating chocolate ingredients.....	G. W. Waite.....	Baltimore, Md.....	June 25, 1836
Heating liquids by steam.....	Jos. B. Armstrong.....	Wilkes co., Ga.....	May 29, 1833
Heating liquids.....	Samuel Belton.....	Philadelphia, Pa.....	Jan. 16, 1809
Heating liquids.....	Roswell Valentine.....	Canaan, N. Y.....	June 13, 1812
Heating liquids in wood cisterns.	David McAllister.....	Brookfield, Vt.....	June 15, 1822
Heating plates for hot pressing.....	Moses A. Quigley.....	Washington co., Md.....	June 15, 1819
Heating rooms.....	Allen Pollock.....	Boston, Mass.....	April 24, 1807
Heating water for scalding hogs.....	Isaac Thorn, jr.....	Bordentown, N. J.....	Feb. 11, 1834
Heating water, machines.....	D. B. Barnum.....	New Fairfield, Ct.....	June 25, 1836
Heating water, steaming vegetables	James S. Marsh & A. Munger.....	Auburn, N. Y.....	April 2, 1841

* Released Sept. 17, 1834.

† Released Sept. 17, 1832.

‡ Antedated June 1, 1843.

|| Patented Aug., 1838.

§ Antedated Jan. 30, 1832.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCES.	WHEN ISSUED.
Hot water, circulation of.....	William Beebe.....	New York.....	Dec. 16, 1845
Illuminator, for stair cases.....	John H. Ross.....	Baltimore, Md.....	June 24, 1835
Jack, steam.....	John Bailey.....	Boston, Mass.....	Feb. 23, 1792
Kettles, and boiler.....	Philo N. Griffith.....	Orange, N. J.....	Sept. 26, 1835
Kettles, hatters', constructing.—See Class 3.			
Kettles, planking.—See Class 3.			
Kettles, potash, mode of setting..	Daniel B. Turner.....	Florence, Ohio.....	Sept. 18, 1841
Kettles, salt, constructing & setting	Chs. C. P. Crosby....	Brooklyn, N. Y.....	Jan. 11, 1840
Kettles, &c., setting for boilers...	Geo. W. Robinson....	Atleborough, Mass...	July 17, 1818
Kettles, sugar, setting*.....	James Malory.....	New Orleans, La.....	Sept. 20, 1838
Kettles, sugar, setting & arranging	Maunsel White.....	New Orleans, La.....	Sept. 17, 1839
Kiln, charring coal.....	Conrad Kounsler.....	Mill Creek, Va.....	June 20, 1825
Kiln, charring coal.....	Michael Carroll.....	Telleco Plains, Tenn	April 28, 1838
Kiln, drying flour.....	Nathan Tyson.....	Baltimore, Md.....	Aug. 3, 1831
Kiln, drying corn.....	Sebre Howard.....	Adrian, Mich.....	Sept. 26, 1846
Kiln, for drying grain.....	James Deneale.....	Virginia.....	July 10, 1800
Kiln, for drying grain.....	James Abraham.....	Middlesex, N. J.....	Dec. 20, 1805
Kiln, for drying grain.....	Benjamin Parry.....	Bucks co., Pa.....	July 7, 1810
Kiln, for drying grain.....	John Hughson.....	Clinton co., N. Y.....	July 18, 1811
Kiln, for drying grain.....	Hez. Parsons.....	Colebrook, N. H.....	July 9, 1812
Kiln, for drying grain.....	Robert Andrews.....	Fleming co., Ky.....	Nov. 7, 1822
Kiln, for drying grain.....	Thomas Crook.....	New Hope, Pa.....	Nov. 30, 1835
Kiln, for drying grain.....	Henry Y. and Ab'm Haupt, jr.	Springfield and Durham, Pa.....	Dec. 5, 1842
Kiln, steam, for drying malt.....	David St. L. Davis...	Hibernia, Tenn.....	Aug. 30, 1822
Kiln, steam.....	George G. Moore.....	New York.....	Dec. 4, 1824
Kitchens, moveable.....	George Youle.....	New York.....	July 1, 1814
Kitchen ranges.....	Eliphalet Nott.....	Schenectady, N. Y.....	April 22, 1835
Kitchen ranges.....	George Johnson.....	Philadelphia, Pa.....	May 23, 1836
Kitchens, steam, for baking.....	Samuel Smith.....	Herkimer, N. Y.....	June 11, 1811
Kitchens, steam, for ships.....	Nich. Boureau.....	Middlesex, N. J.....	Aug. 30, 1802
Kitchens, summary.....	John Bonis.....	Baltimore, Md.....	Jan. 19, 1826
Lamps.....	James Mallory.....	New York.....	Nov. 20, 1812
Lamps.....	Edward Clarke.....	Philadelphia, Pa.....	April 27, 1814
Lamps.....	Alexander Black.....	Barnstable, Mass...	Oct. 3, 1817
Lamps.....	Winslow Lewis.....	Boston, Mass.....	Jan. 23, 1818
Lamps.....	James Duke.....	New York.....	Aug. 15, 1821
Lamps.....	Isaiah Jennings.....	New York.....	Mar. 3, 1829
Lamps.....	Isaiah Jennings.....	New York.....	Sept. 10, 1829
Lamps.....	Daniel Gilbert.....	Brattleborough, Vt.	Mar. 29, 1834
Lamps.....	Jacob Keim.....	Philadelphia, Pa.....	Mar. 29, 1834
Lamps†.....	Isaiah Jennings.....	New York city.....	Sept. 22, 1836
Lamps†.....	Isaiah Jennings.....	New York city.....	Oct. 16, 1830
Lamps.....	Samuel Rust.....	New York city.....	April 20, 1837
Lamps.....	Samuel Rust.....	New York city.....	June 30, 1837
Lamps, &c.....	Samuel Rust.....	New York city.....	Jan. 9, 1838
Lamps, &c.....	Samuel Rust.....	New York city.....	June 7, 1838
Lamps, &c.....	John C. Fletcher.....	Springfield, Ohio.....	July 12, 1838
Lamps, &c.....	Joshua T. Beale.....	London, England.....	Nov. 29, 1838
Lamp||.....	Edwin B. Horn.....	Boston, Mass.....	Jan. 8, 1842
Lamps.....	Stephen J. Gold.....	Cornwall, Conn.....	May 8, 1843
Lamps.....	Samuel Rust.....	New York.....	Sept. 14, 1843
Lamps.....	John Davidson.....	Baltimore, Md.....	July, 2, 1846
Lamps.....	Henry B. Fernald....	Boston, Mass.....	May 17, 1844
Lamps, design for.....	P. F. Slane.....	E. Cambridge, Mass	Mar. 26, 1845
Lamps, design.....	William W. Bacon.....	Middletown, Conn...	Oct. 18, 1842
Lampst.....	P. F. Slane and John Goding.....	E. Cambridge, Mass	Jan. 23, 1845
Lamp, alcohol, for medicated vapor bath. **	Giles L. F. Griswold, assign'ee of L. E. Hicks	Middletown, Conn.	Mar. 16, 1844
Lamps, argand, arranging the cylindrical tubular burner.....	William F. Shaw.....	Boston, Mass.....	Dec. 31, 1842
Lamps, argand.....	David Melville.....	Newport, R. I.....	Nov. 19, 1818
Lamps, argand, to common.....	Lewis F. Gallop.....	Woodstock, Vt.....	Mar. 9, 1831

* Add'l imp., Dec. 11, 1838. † Add'l imp., Mar. 15, 1838. ‡ Renamed Sept. 22, 1838. § Antedated April 2, 1838. || Add'l imp., Dec. 17, 1842. ¶ Antedated July 23, 1844. ** Antedated Dec. 15, 1843.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCES.	WARRANTS.
Lamps, argand, construction of...	Benj. Hemmenway ..	Roxbury, Mass	Jan. 20, 1841
Lamps, argand, construction of...	John S. Tough	Baltimore, Md	May 11, 1841
Lamps, argand oil burner, adapted to burn spirits of turpentine...	Charles Carr	Philadelphia, Pa....	June 20, 1840
Lamps, argand, spirits of turpentine, &c., burning	Charles Carr	Philadelphia, Pa....	Mar. 28, 1842
Lamps, argand, volatile ingredients burning.....	Daniel Pettibone	Philadelphia, Pa....	Mar. 28, 1842
Lamps, for boiling water.....	Thomas G. Fessenden	Boston, Mass.....	Jan. 31, 1827
Lamps, for burning evaporable ingredients.....	Isaiah Jennings.....	New York.....	Aug. 1, 1831
Lamp-burner, capillary.....	William H. Starr	New York, N. Y....	June 6, 1846
Lamps, burning camphine*	Augustus V. H. Webb	New York.....	Feb. 19, 1839
Lamps, burning camphine†.....	Michael B. Dyott	Philadelphia, Pa....	Aug. 25, 1840
Lamps, burning camphine, &c....	Stephen J. Gold.....	Cornwall, Conn	July 16, 1841
Lamps, burning lard and other concrete substances.	Edward T. Williams & Latham T. Tew....	Newport, R. I	June 26, 1841
Lamps, burning lard, tallow, &c..	George Carr.....	Buffalo, N. Y.....	Sept. 4, 1841
Lamps, burning lard, tallow, &c..	{ Norman S. Cate and James H. Putnam	Charlestown Mass..	Nov. 16, 1841
Lamps, burning tallow.....	Moses S. Woodward.	Marshallton, Pa	Sept. 18, 1841
Lamps, burning volatile ingredients	Isaiah Jennings.....	New York.....	Sept. 11, 1841
Lamps, candle.....	Asa Taylor	Philadelphia, Pa....	Oct. 9, 1819
Lamp caps.....	Francis Draper	E. Cambridge, Mass	Mar. 20, 1844
Lamp caps	D. Javes & New England Glass Co., assignees of R. H. Eddy.	Boston, Mass.....	May 10, 1844
Lamps, coach	William Lawrence ...	Wallingford, Conn..	April 7, 1838
Lamps, compound spirits or oil, burning.....	William Magee.....	New York.....	June 27, 1832
Lamps, construction of	John W. Shulz & Joel Truel	Medford, Mass	Mar. 19, 1831
Lamps, construction and economy of light	Isaiah Jennings.....	New York.....	July 11, 1829
Lamps, construction of.....	Christian and Charles Richman	Philadelphia, Pa....	June 11, 1841
Lamp, construction of	Christopher West....	Baltimore, Md	Oct. 7, 1844
Lamps, double reflecting*.....	William Foster, jr., & Leonard Foster....	Boston, Mass.....	Aug. 28, 1813
Lamps, economical, condensing..	Thomas Phillips	New York.....	June 25, 1828
Lamps, essential oils, burning ..	Michael B. Dyott	Philadelphia, Pa....	May 30, 1842
Lamps, fat, &c., burning.....	Josiah Warren.....	Cincinnati, Ohio....	Feb. 28, 1821
Lamps, regulating the flame of..	John S. Tough	Baltimore, Md	July 17, 1839
Lamps, gas.....	David Melville.....	Newport, R. I.....	May 1, 1810
Lamps, gas.....	David Melville.....	Newport, R. I.....	Mar. 18, 1813
Lamps, gas.....	Solomon Andrews....	Perth Amboy, N. J.	May 10, 1838
Lamps, gas.....	Joseph M. Truman & George Truman	Penn township, Pa..	Nov. 19, 1833
Lamps, gas, &c.....	Robert Cornelius....	Philadelphia, Pa....	Mar. 16, 1841
Lamps, glass socket for	Henry Whitney and Thomas Leighton...	Cambridge, Mass....	Jan. 11, 1839
Lamps, glass, caps of.....	Francis Draper	E. Cambridge, Mass	Jan. 17, 1842
Lamps, glass, chimneys.....	Deming Jarves.....	Boston, Mass.....	July 20, 1829
Lamps, hanging†.....	Alonzo Platt.....	Middletown, Conn..	Oct. 8, 1836
Lamps, hydro-pneumatic.....	Stephen S. Lee	Providence, R. I....	April 21, 1842
Lamps, improvement in	Benjamin F. Greenough	Boston, Mass.....	April 10, 1841
Lamps, improvement in §.....	Samuel Rust.....	New York, N. Y....	Mar. 21, 1846
Lamps, improvement in ¶.....	T. F. Strong.....	Citizen of the U. S., residing in London	July 7, 1846
Lamps, lard.....	Benjamin H. Horn...	Boston, Mass.....	May 26, 1842
Lamps, lard.....	Archibald H. Baird ..	New York, N. Y....	May 26, 1842
Lamps, lard.....	Ellis S. Archer	Philadelphia, Pa....	June 24, 1842
Lamps, lard.....	Fred'k H. Southworth	Washington, D. C....	July 2, 1842
Lamps, lard.....	John T. Creighton ...	Alexandria, D. C....	Aug. 11, 1842

* Antedated Nov. 23, 1838; disclaimer April 15, 1839; add'l imp., Sep. 25, 1839. † Add'l imp., March 18, 1841.
 ‡ Antedated Aug. 13, 1836. § Antedated Jan. 29, 1843. ¶ Antedated May 1, 1843.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Lamps, lard.....	John Grannis.....	Oberlin, Ohio.....	Aug. 25, 1842
Lamps, lard.....	Fred'k H. Southworth	Washington, D. C....	Oct. 22, 1842
Lamps, lard.....	John Lee.....	Wellsville, Ohio.....	Nov. 21, 1842
Lamps, lard.....	P. Robinson.....	Chillicothe, Ohio.....	Dec. 5, 1842
Lamps, lard.....	Zebulon Worrall.....	Chesterhill, Ohio.....	Feb. 7, 1842
Lamps, lard.....	Horace Howard.....	Wooster, Ohio.....	Feb. 10, 1843
Lamps, lard.....	William S. Moore.....	Springfield, Illinois..	Feb. 10, 1843
Lamps, lard.....	Silas G. Terry.....	Portsmouth, Ct.....	Feb. 24, 1843
Lamps, lard.....	Patrick J. Clark.....	Meriden, Ct.....	Mar. 21, 1843
Lamps, lard*.....	Robert Cornelius.....	Philadelphia, Pa.....	April 6, 1843
Lamps, lard.....	Charles Wilhelm.....	Philadelphia, Pa.....	April 6, 1843
Lamps, lard.....	H. P. Benton.....	Norwalk, Ohio.....	April 10, 1843
Lamps, lard.....	William Thomson.....	Cincinnati, Ohio.....	April 10, 1843
Lamps, lard.....	Luther Jones.....	Utica, N. Y.....	May 26, 1843
Lamps, lard.....	Henry Rose.....	Rushville, Illinois.....	Aug. 4, 1843
Lamps, lard.....	Harvey Tomlinson.....	Geneva, N. Y.....	Sept. 1, 1843
Lamps, lard.....	Thomas Houghton & John F. Wallace.....	Philadelphia, Pa.....	Nov. 15, 1843
Lamps, lard†.....	Jesse Neal, assignee of Benjamin H. Maltby	Middlebury & Rootstown, Ohio.....	May 4, 1842
Lamp, lard.....	John Tobin.....	Bloomfield, N. J.....	Mar. 26, 1844
Lamps, for lard.....	Stephen P. Moorehouse	Ludlowville, N. Y.....	April 26, 1830
Lamps, lard.....	Andrew Keyser.....	Fulton, Missouri.....	Aug. 20, 1845
Lamps, lard, with argand burners†	Robert Cornelius.....	Philadelphia, Pa.....	April 6, 1843
Lamps, and lamp torches.....	Jeremiah Martin.....	Boston, Mass.....	June 30, 1837
Lamps, light-house.....	Christopher Cornelius.	Philadelphia, Pa.....	Dec. 28, 1822
Lamps, light-house.....	Winslow Lewis, senr. Benj. Hemmenway...	Boston, Mass. } Roxbury, Mass. }	Aug. 7, 1844
Lamps, light-house.....	Charles Wheeler.....	Rockport, Mass.....	April 11, 1846
Lamps, light-house burner.....	Isaac Dunham.....	Bristol, Me.....	June 20, 1836
Lamps, lighting.....	Edmund Hubbard and Wm. L. Cheney.....	Chester, Mass.....	Mar. 14, 1834
Lamps, for liquids to be burnt therein.....	Joseph Hawkins.....	Baltimore, Md.....	April 21, 1810
Lamp, night.....	T. F. Strong.....	New York, N. Y.....	July 20, 1846
Lamps, nurse.....	William Howe.....	Boston, Mass.....	Dec. 31, 1812
Lamps, patent.....	Samuel Rust.....	New York city.....	Sept. 25, 1837
Lamps, patent.....	Samuel Rust.....	New York city.....	Jan. 9, 1838
Lamps, pneumatic.....	Ez. T. Smith.....	Lenox, Mass.....	Nov. 8, 1819
Lamps, reflector, elastic.....	Josiah Flagg & Josiah Flagg, jr.....	Boston, Mass.....	May 17, 1810
Lamps, reflecting.....	John C. Fletcher.....	Springfield, Ohio.....	Mar. 30, 1836
Lamps, reflector for.....	Edward Brown.....	Dover, N. H.....	Oct. 1, 1830
Lamps & reflectors of light-houses, arranging.....	Aaron Folger.....	Nantucket, Mass.....	Mar. 28, 1842
Lamps, regulating draught.....	E. Whelan.....	Philadelphia, Pa.....	Mar. 26, 1845
Lamps, safety compass.....	Jos. Feinour and Jos. Feinour, jr.....	Philadelphia, Pa.....	April 5, 1828
Lamps, screw head for.....	Patrick J. Clark.....	Meriden, Ct.....	June 7, 1839
Lamp, self-supplying.....	Edwin B. Horn.....	Boston, Mass.....	Sept. 11, 1844
Lamps, shade to.....	Samuel Rust.....	New York city.....	Jan. 9, 1838
Lamps, signal.....	Jos. Feinour and Jos. Feinour, jr.....	Philadelphia, Pa.....	Aug. 1, 1838
Lamps, spirits of turpentine, burning.....	Luther Jones.....	New York city.....	Nov. 25, 1838
Lamps, suspension, barrel.....	Ira Couch and James A. Frary.....	Meriden, Ct.....	Mar. 13, 1833
Lamps, tallow.....	John Love.....	South Carolina.....	June 11, 1798
Lamps, tallow.....	Isaiah Jennings.....	New York.....	May 20, 1830
Lamps, tallow.....	Norman Rublee.....	Montpelier, Vt.....	Dec. 4, 1832
Lamp, volatile ingredients, burning	Isaiah Jennings.....	New York, N. Y.....	Oct. 12, 1844
Lamps for volatile materials.....	Aug. V. H. Webb.....	New York, N. Y.....	Nov. 4, 1842
Lamps, volatile materials.....	George Evies.....	Boston, Mass.....	May 22, 1835

*Antedated April 1, 1843.

†Additional improvement, Nov. 28, 1842.

‡Antedated April 1, 1843.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN GRANTED.
Lamps, water in combustion with spirits of turpentine.....	Samuel Morey.....	Boston, Mass.....	Nov. 19, 1833
Lamp wicks*.....	Samuel Rust.....	New York.....	May 10, 1845
Lamp wicks, raising†.....	Samuel Rust.....	New York, N. Y.....	Mar. 9, 1844
Lamp wicks, raising & lowering†.	Samuel Rust.....	New York.....	Oct. 6, 1835
Lamps, wick tubes for.....	Enoch W. Perry.....	Boston, Mass.....	Oct. 12, 1842
Lamp wicks, tubes for.....	James Maclean.....	Philadelphia, Pa.....	Dec. 26, 1845
Lamps, of wood.....	Jos. H. Mather.....	Saybrook, Ct.....	July 20, 1831
Lamps, wooden, metallic bowls..	John Street.....	Philadelphia, Pa.....	May 2, 1846
Lantern.....	John Staniford, and A. D. Allen.....	Windham, Ct.....	May 10, 1804
Lantern, reflecting and magnifying	Winslow Lewis.....	Boston, Mass.....	June 8, 1810
Lantern, for steamboats||.....	John M. Read.....	Louisville, Ky.....	Dec. 28, 1838
Lights, revolving, for light-houses	Benjamin F. Willard.....	Boston, Mass.....	Feb. 20, 1839
Mantles, for fire places.....	Elijah Skinner.....	Sandwich, N. Y.....	July 20, 1831
Mantle pieces, cast iron.....	Isaac Deaves.....	Philadelphia, Pa.....	Feb. 21, 1821
Metallic bodies, treatment of....	Eliphalet Nott.....	Schenectady, N. Y.....	June 29, 1823
Oil feeders§.....	Robert Cornelius.....	Philadelphia, Pa.....	April 6, 1843
Oil feeders.....	Joseph Benson.....	Boston, Mass.....	Feb. 28, 1844
Oil feeders.....	Eliphalet S. Scripture.....	Syracuse, N. Y.....	Mar. 15, 1845
Ovens.....	John West.....	Stafford, Va.....	Oct. 27, 1808
Ovens.....	John Barnitt.....	Upper Providence, Pa.....	Mar. 3, 1809
Ovens.....	John Bouis.....	Baltimore, Md.....	Dec. 30, 1812
Ovens.....	Josiah C. Carlisle.....	Chesterfield, Me.....	April 19, 1833
Ovens.....	Richard R. Tongue.....	Fryburg, Me.....	Aug. 15, 1834
Ovens.....	Samuel S. Eaton.....	Mansfield, Ct.....	Dec. 17, 1834
Ovens.....	Benjamin Blaney.....	Boston, Mass.....	Dec. 17, 1834
Ovens.....	Samuel Pollard.....	Orono, Me.....	Feb. 3, 1836
Ovens.....	William H. Akins.....	Berkshire, N. Y.....	June 2, 1836
Ovens, American.....	Ephraim Treadwell.....	Salem, Mass.....	Aug. 27, 1818
Ovens, bake.....	Henry Reip.....	Baltimore, Md.....	Sept. 27, 1825
Ovens, baker.....	Eben B. Strong.....	Buffalo, N. Y.....	April 11, 1836
Ovens, baking, and heating houses	Jacob Baldwin.....	New York city.....	Oct. 27, 1835
Ovens, baking over a cooking furnace.....	Ely Moody.....	Northfield, Mass.....	April 5, 1828
Ovens, construction & application	Samuel Pollard.....	Bucksport, Me.....	June 12, 1835
Ovens, for cooling and annealing	glass.—See Class 15, Glass.		
Oven doors, improvement in.....	George W. Eddy.....	Waterford, N. Y.....	Feb. 10, 1846
Ovens, double in chimneys.....	Reuben Bacon & Wm. E. Marshall.....	Walpole, N. H.....	Feb. 9, 1831
Ovens, elevated, combined with cooking and other stoves.....	Samuel B. Spaulding.....	Brandon, Vt.....	Aug. 28, 1841
Ovens, elevated, valves for.....	Henry Stanley.....	West Poutney, Vt.....	June 11, 1842
Ovens, elevated, combined with cooking stoves.....	Eli C. Robinson.....	Troy, N. Y.....	Dec. 30, 1841
Ovens, elevated, used on cooking stoves.....	J. W. Williston & W. A. Arnold.....	Northampton, Mass.....	Aug. 25, 1840
Ovens, flue, door.....	Benj. Simonds, jr.....	Bedford, Mass.....	Oct. 15, 1821
Ovens, heating by anthracite.....	F. C. Treadwell.....	Brooklyn, N. Y.....	June 16, 1836
Ovens, heating rooms.....	J. A. Pitts.....	Winthrop, Me.....	July 2, 1836
Ovens, heating rooms.....	Michael B. Poiteaux.....	Richmond, Va.....	Jan. 17, 1827
Ovens, perpetual.....	James Deneale.....	Dumfries, Va.....	Dec. 4, 1806
Ovens, perpetual.....	William T. Hunter.....	New York.....	Jan. 8, 1818
Ovens, perpetual, rotary.....	J. L. D. Mathies.....	Rochester, N. Y.....	Dec. 21, 1831
Ovens, portable.....	Frs. L. Hedenberg.....	New York.....	April 26, 1828
Ovens, portable.....	William Goddard.....	Portsmouth, N. H.....	Oct. 12, 1831
Ovens, portable.....	Charles Vale.....	Newark, N. J.....	June 26, 1835
Ovens, portable, bake.....	David Hull.....	Utica, N. Y.....	Mar. 28, 1834
Ovens, portable.....	Thaddeus B. Curtis.....	New Haven, Ct.....	June 27, 1839
Ovens, portable, combined with stoves.....	Edward Gosselin.....	New York.....	Nov. 7, 1840
Ovens, portable, rotary.....	Richard Wilcox.....	New York.....	April 20, 1820
Ovens, railway.....	Sewall Short.....	Nantucket, Mass.....	Oct. 6, 1837
Ovens, reflecting.....	C. D. Van Allen.....	Pen Yan, N. Y.....	Mar. 31, 1836

* Antedated April 4, 1845.

† Antedated Jan. 29, 1844.

‡ Reissued Dec. 16, 1835.

|| Additional improvement, April 25, 1839.

§ Antedated April 1, 1843

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Ovens, reflecting.....	Benjamin Ames.....	Ithaca, N. Y.....	June 25, 1836
Ovens, with reflectors.....	John Hurd, jr.....	Boston, Mass.....	Nov. 10, 1829
Ovens, retaining, for baking and cooking.....	Stephen J. Gold.....	Cornwall, Ct.....	Mar. 29, 1834
Ovens, revolving.....	Stephen Harris.....	Norfolk, Va.....	Dec. 5, 1825
Ovens, for stoves.....	David W. Barker.....	Clyde, N. Y.....	July 29, 1837
Ovens, tin, bake.....	William Lewis.....	Franklin, N. Y.....	Jan. 6, 1832
Ovens, union*.....	J. Swift Gold.....	New York.....	Dec. 16, 1833
Ranges, cooking.....	Herbert K. Simpson.....	Boston, Mass.....	Mar. 14, 1840
Ranges, cooking.....	Nathan P. Kingsley.....	Boston, Mass.....	Oct. 11, 1841
Ranges, cooking.....	Abiram Spauldin.....	New York.....	Nov. 12, 1841
Ranges, cooking.....	John Brereton.....	New York, N. Y.....	April 21, 1842
Ranges, cooking.....	Moses Pond.....	Boston, Mass.....	Mar. 4, 1843
Ranges, cooking.....	Herbert H. Stimpson.....	Boston, Mass.....	May 17, 1844
Ranges, cooking.....	Moses Pond.....	Boston, Mass.....	May 29, 1845
Ranges, cooking.....	Jordan L. Mott.....	New York.....	Nov. 1, 1845
Range, cooking.....	John P. Hayes.....	Boston, Mass.....	Aug. 26, 1846
Range, cooking.....	Moses Pond.....	Boston, Mass.....	Oct. 29, 1846
Range, cooking.....	H. H. Stimpson.....	Boston, Mass.....	May 16, 1846
Ranges, kitchen.....	Ebenezer Barrows.....	Rochester, Mass.....	July 18, 1840
Ranges, kitchen.....	Ambr. W. Thompson.....	Philadelphia, Pa.....	Mar. 20, 1844
Ranges, kitchen.....	Julius Fink.....	Philadelphia, Pa.....	April 10, 1844
Range, kitchen.....	Julius Fink.....	Philadelphia, Pa.....	May 30, 1846
Range, kitchen.....	G. E. Waring and R. E. Peterson, adm'rs of A. Wolcott, dec'd.	Stamford, Conn.....	June 20, 1846
Reflectors, metallic.....	Alonzo Farrar.....	Boston, Mass.....	April 4, 1844
Register for stove, self-acting.....	Washburn Race.....	Seneca Falls, N. Y.....	April 4, 1846
Register, for heating furnace.....	E. Barrows.....	New York, N. Y.....	May 28, 1846
Roasting jack.....	Ezra Whitman, jr.....	Winthrop, Maine.....	April 28, 1834
Roasting meat.....	Samuel Pierce.....	New York city.....	July 12, 1838
Safe.—See Fire-proof, Class 2.			
Screen, fire.....	Caleb Pierce.....	Salem, Mass.....	April 29, 1829
Screens for lifting, coal, grain, &c.	Elisha D. Payne and Enos Woodruff.....	Newark, N. J.....	April 19, 1841
Screening or sifting coal.....	Benj. S. Hort.....	Kensington, Pa.....	Feb. 7, 1842
Sieve, or riddle, for separating ashes from cinders.....	John J. Hess.....	Philadelphia, Pa.....	Jan. 9, 1834
Sieve, or riddle, for separating coal from dirt.....	Jesse E. Dow, Wm. M. Edwards, & Sam. Davis.....	Charlestown, Mass.....	Mar. 27, 1834
Sifter, wire, rolling.....	Nathan Sellers.....	Philadelphia, Pa.....	Aug. 16, 1820
Slabs, for fire-brick and stoves, lining, &c.....	Joseph Putnam.....	Salem, Mass.....	Aug. 20, 1835
Smoke, conductor.....	John C. Teale.....	New York.....	Sep. 11, 1810
Smoke, consuming.....	John Acoff.....	Wheeling, Va.....	Mar. 5, 1818
Smoke, consuming.....	Nathan Lockling.....	Sparta, N. Y.....	Mar. 4, 1836
Smoke, ventilator.....	Silas Smith.....	Hamilton, Ohio.....	Mar. 17, 1832
Spit, turner.....	Samuel Morey.....	Oxford, N. Y.....	Jan. 26, 1793
Steam generator, portable.....	Stephen Atwater.....	Rochester, N. Y.....	Jan. 20, 1843
Steaming, boiling, &c., apparatus.....	B. F. Gold.....	New York.....	Jan. 9, 1838
Steaming and mashing apples.....	John Dimm.....	Greenwood, Pa.....	Dec. 1, 1837
Stoves.....	James M. Callmont.....		Feb. 20, 1797
Stoves.....	Thomas Hirst.....	Pennsylvania.....	Mar. 11, 1797
Stoves.....	Caleb Wheaton.....	Massachusetts.....	Mar. 29, 1797
Stoves.....	John W. Godfrey and Wm. Lane.....		July 14, 1798
Stoves.....	William Henderson.....	Connecticut.....	Feb. 12, 1801
Stoves.....	Henry Abbet.....	Pennsylvania.....	May 4, 1802
Stoves.....	Samuel Dickey.....	Oxford, Pa.....	Mar. 7, 1806
Stoves.....	James Fales.....	Newport, R. I.....	Feb. 22, 1809
Stoves.....	Augustus Graham.....	Frederickton, Md.....	Nov. 6, 1810
Stoves.....	William Watson.....	Weymouth, N. J.....	Mar. 2, 1811
Stoves.....	Thomas Power.....	New York.....	Sep. 27, 1811

* Reissued Aug. 6, 1838.

† Reissued Aug. 8, 1846.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHERE ISSUED.
Stoves	Nich. Lloyd	Philadelphia, Pa.	Feb. 29, 1812
Stoves	Alfred Janes	Hartford, Conn.	Mar. 1, 1813
Stoves	George Warrall	Philadelphia, Pa.	Mar. 30, 1813
Stoves	William T. James	Union Village, N. Y.	April 26, 1815
Stoves	Charles Postley	New York	April 26, 1815
Stoves	Aaron Lane	New York	May 11, 1815
Stoves	Comfort Barney	Warren, R. I.	Dec. 27, 1815
Stoves	Eliakim Corey	Milton, N. Y.	May 30, 1816
Stoves	Thos. & Isaac Power	Hudson, N. Y.	Aug. 31, 1816
Stoves	Henry L. Leibenace	New York	Sep. 7, 1816
Stoves	James Ross	Elizabethtown, N. J.	Dec. 3, 1816
Stoves	Anthony B. Martin	Hagerstown, Md.	Dec. 26, 1816
Stoves	Joseph P. Simpson	New York	Apr. 5, 1817
Stoves	Ephraim Treadwell	Boston, Mass.	April 26, 1817
Stoves	Burgess Allison	Philadelphia, Pa.	April 10, 1818
Stoves	Robert & John Mount	New York	April 11, 1818
Stoves	Aaron Lane	New York	Sept. 15, 1818
Stoves	James Barron	Norfolk, Va.	May 14, 1822
Stoves	B. Seymour and A. C. Battis	Utica, N. Y.	May 25, 1822
Stoves	John Tasker	Philadelphia, Pa.	Feb. 3, 1823
Stoves	Louis Gourjou	Philadelphia, Pa.	Sep. 22, 1823
Stoves	Thomas Woolson	Claremont, N. H.	July 20, 1831
Stoves	Powel Stackhouse	Philadelphia, Pa.	Dec. 22, 1831
Stoves	Nathan Parrish	Mendon, N. Y.	Nov. 2, 1832
Stoves*	Jordon L. Mott	New York	Dec. 30, 1833
Stoves	George J. Payne	Borough of Erie, N. Y.	Mar. 6, 1835
Stoves	Jordon L. Mott	New York	July 21, 1835
Stoves	Daniel West & Ferdinand Von Sickle	Hudson, N. Y.	July 21, 1835
Stoves	Wm. M. Carmichael	Hempstead, N. Y.	Mar. 23, 1836
Stoves	John H. B. Swanzey	Lynn, Mass.	Mar. 30, 1836
Stoves	Frazier, Blanchard and Gill	New York	April 28, 1836
Stoves	Fred. A. Fickhardt	Eaton, Pa.	April 28, 1836
Stoves	Nathaniel Russell	Waterville, Maine.	May 14, 1836
Stoves	Howell Parmalee	Watervleit, N. Y.	July 2, 1836
Stoves	John Collum	Grafton, Mass.	July 31, 1837
Stoves	Phineas Gillet	New Hartford, Conn.	June 30, 1838
Stoves	James Miller	Baltimore, Md.	Oct. 16, 1838
Stoves	Abel Cornell & Niram R. Merchant	Guilford, N. Y.	July 16, 1842
Stoves	George Nelson	Boston, Mass.	Sept. 17, 1842
Stoves	Stedman W. Hanks	Lowell, Mass.	Oct. 12, 1842
Stoves	Philetas Phillips	Middlet'n Point, N. J.	Nov. 12, 1842
Stoves	Reuben Elmendorf	Kingston, N. Y.	April 25, 1843
Stoves	James Taylor	Peekskill, N. Y.	May 2, 1843
Stoves	Richard W. Belson	Danville, Pa.	June 1, 1843
Stoves	James Robb	Lewistown, Pa.	Aug. 4, 1843
Stoves, design for	A. Whitney	Albany, N. Y.	July 19, 1844
Stoves, design for†	J. L. Mott	New York	Feb. 12, 1844
Stove, design for	Low, Chollar & Jones, assignee of E. Ripley	Troy, N. Y.	Nov. 12, 1845
Stove, design for	Leake & Low, assignee of Addison Low	Albany, N. Y.	Feb. 12, 1845
Stove, design for	Charles S. Hine	New York	May 1, 1845
Stoves	John Morrison	Newark, N. J.	Mar. 12, 1845
Stoves	Samuel Utter	New York	May 1, 1845
Stoves	Francis L. Hedenburg	New York	May 7, 1845
Stoves	Jehiel T. Ferrand	Port Byron, N. Y.	Aug. 4, 1845
Stoves	Peter J. Clute	Schenectady, N. Y.	Sept. 19, 1845
Stove, design for	Henry Stanley	Poultney, Vt.	Oct. 16, 1845
Stove, design for	Rathbone & Co., assignee of Addison Low	Albany, N. Y.	Oct. 7, 1845

* Reissued Aug. 8, 1846.

† Antedated Dec. 1, 1843.

INVENTIONS OR DISCOVERIES.	PATENTEE.	REFERENCE.	WHEN ISSUED.
Stove, design for.....	David Root.....	Cincinnati, Ohio....	Sept 9, 1845
Stove, design for ^a	Johnson Geer & Cox, assignees of E. Ripley	Troy, N. Y.....	Oct. 16, 1845
Stove, design for.....	E. P. Penniman.....	Rochester, N. Y....	Sept. 9, 1845
Stove, design for.....	J. S. & M. Peckham...	Utica, N. Y.....	Oct. 16, 1845
Stove, design for.....	John Bt. Clute.....	Schenectady, N. Y..	May 28, 1846
Stove, design for.....	Goodhue and Guild...	Cincinnati, Ohio....	Aug. 18, 1846
Stove, design for.....	William P. Cresson, assignee of Stuart & Beasley.....	Philadelphia, Pa....	July 25, 1846
Stove, design for.....	Wm. P. Cresson, as- signee of Stuart, Beas- ley & Sailor.....	Philadelphia, Pa....	Oct. 3, 1846
Stove, design for.....	S. S. Jewett and F. H. Root.....	Buffalo, N. Y.....	Oct. 3, 1846
Stove, design for.....	S. S. Jewett and F. H. Root.....	Buffalo, N. Y.....	Oct. 3, 1846
Stove, design for.....	Samuel Pierce.....	Peeksville, N. Y....	June 27, 1846
Stove, design for.....	Samuel Hanley assign- or to Dunham & Co.	Troy, N. Y.....	Oct. 10, 1846
Stove, design for.....	James Wager.....	Troy, N. Y.....	Oct. 10, 1846
Stove.....	Loftis Wood.....	New York, N. Y....	Aug. 28, 1846
Stove.....	O. S. Hartshorn, H.M. Payson, and A. Ring	Portland, Maine....	Sept. 3, 1846
Stove, design for.....	J. S. and M. Peckham	Utica, N. Y.....	Oct. 3, 1846
Stove, design for.....	J. S. and M. Peckham	Utica, N. Y.....	Oct. 3, 1846
Stove, design for.....	William Jackson.....	Syracuse, N. Y....	July 25, 1846
Stove, design for.....	Ezra Ripley.....	Troy, N. Y.....	July 25, 1846
Stove, design for.....	Ezra Ripley.....	Troy, N. Y.....	July 25, 1846
Stove, design for.....	Johnson and Cox, as- signee of E. Ripley.	Troy, N. Y.....	Oct. 3, 1846
Stove, design for||.....	Albert G. Bristol....	Rochester, N. Y....	Jan. 23, 1846
Stove, design for.....	Wilder, Bleeker, and Vose, assignees of William Shaw....	Albany, N. Y.....	July 10, 1846
Stove, design for.....	J. F. Seymour, assign- ee of L. O. Palmer....	Utica, N. Y.....	Oct. 10, 1846
Stove, design for.....	J. F. Seymour, assign- ee of L. O. Palmer....	Utica, N. Y.....	Oct. 10, 1846
Stove, design for.....	Annes A. Lincoln....	Norton, Mass.....	Dec. 22, 1846
Stove, design for.....	George M. Norton....	Rochester, N. Y....	July 25, 1846
Stove, design for.....	L. S. Bacon.....	Le Roy, N. Y.....	July 25, 1846
Stove, design for§.....	Barber and Hoffman.	Bridgeton, N. J....	July 10, 1846
Stove, design for.....	John Morrison.....	Troy, N. Y.....	July 10, 1846
Stove, design for||.....	Samuel D. Vose.....	Albany, N. Y.....	Aug. 18, 1846
Stoves, air funnel.....	Hiram Wales.....	Randolph, Mass....	May 18, 1827
Stoves, air heating.....	Salvin F. Kellogg....	Norwalk, Ohio.....	April 16, 1842
Stoves, air heating.....	Charles B. Boynton..	Housatonic, Mass..	Feb. 20, 1843
Stoves, air heating and cooking..	John Woolley.....	Springfield, Mass..	Mar. 16, 1844
Stoves, air tight**.....	Isaac Orr.....	Georgetown, D. C..	Jan. 20, 1836
Stoves, air tight.....	Thomas M. Jones....	Boston, Mass.; now in England.....	Aug. 11, 1841
Stoves, air tight.....	Stephen M. Allen....	Boston, Mass.....	Jan. 17, 1842
Stoves, air tight.....	Zephaniah Bosworth.	Marietta, Ohio.....	April 6, 1842
Stoves, air tight.....	Anson Atwood.....	Troy, N. Y.....	Mar. 26, 1845
Stoves, air tight, design for.....	Benjamin Starbuck, as- signee of A. Atwood	Troy, N. Y.....	July 14, 1845
Stove, air tight, design for.....	John F. Rathbone....	Albany, N. Y.....	July 10, 1846
Stoves, air tight.....	John Cline.....	Norwalk, Ohio.....	Jan. 6, 1842
Stoves, air tight, self-regulating..	Harned and Elliott, as- signees of Saxton and Elliot.....	Philadelphia, Pa....	Oct. 30, 1844
Stoves, air tight, or Arnott's stoves.	Joseph E. Fisk.....	Salem, Mass.....	Nov. 3, 1841

* Antedated Aug. 14, 1845. † Antedated Sept. 6, 1845. ‡ Antedated May 23, '46. § Antedated Sept. 22, '45.
 ¶ Antedated May 18, 1846. ¶ Antedated June 20, 1846. ** Reissued November 12, 1842.

INVENTIONS OR DISCOVERIES.	PATENTERS.	WHERE GRANTED.	WHEN ISSUED.
Stoves, air warmer.....	J. J. Heintzelman.....	Philadelphia, Pa....	June 16, 1836
Stoves, anthracite.....	F. Atwater.....	New Haven, Conn....	June 30, 1836
Stoves, anthracite coal.....	Anthony Savage.....	Pottsville, Pa.....	June 10, 1830
Stoves, anthracite coal.....	Jordan L. Mott.....	New York.....	May 30, 1832
Stoves, anthracite coal*.....	Eliphalet Nott.....	Schenectady, N. Y....	Oct. 25, 1832
Stoves, anthracite coal†.....	James Atwater.....	New Haven, Conn....	Aug. 23, 1833
Stoves, anthracite coal.....	Abraham D. Spoor.....	Coxsackie, N. Y....	Mar. 15, 1834
Stoves, anthracite coal.....	Jacob Janeway.....	New Brunswick, N. J..	Jan. 27, 1835
Stoves, anthracite coal.....	Adrian Jones.....	Hartford, Conn....	June 2, 1836
Stoves, anthracite coal.....	Aaron O. Price.....	Newark, N. J.....	June 14, 1837
Stoves, anthracite coal.....	Jordan L. Mott.....	New York city.....	July 22, 1837
Stoves, anthracite, ashpit, closing	Eliphalet Nott.....	Schenectady, N. Y....	June 29, 1833
Stoves, anthracite, brick.....	Eliphalet Nott.....	Schenectady, N. Y....	June 29, 1833
Stoves, anthracite, combination..	James Atwater.....	New Haven, Conn....	Aug. 23, 1833
Stoves, anthracite, damper, and handle.....	Eliphalet Nott.....	New Haven, Conn....	June 29, 1833
Stoves, anthracite, lining.....	Eliphalet Nott.....	New Haven, Conn....	June 29, 1833
Stoves, anthracite, moveable, flat.	Eliphalet Nott.....	New Haven, Conn....	June 29, 1833
Stoves, anthracite, mica, sashes for	Eliphalet Nott.....	New Haven, Conn....	June 29, 1833
Stoves, anthracite, sectional tops..	Eliphalet Nott.....	New Haven, Conn....	June 29, 1833
Stoves, anthracite, vertical grate..	Eliphalet Nott.....	New Haven, Conn....	June 29, 1833
Stoves, anthracite, wrought iron for	Thomas M. Southwick	Troy, Conn.....	June 6, 1835
Stoves, apparatus for regulating the heat of.....	Samuel D. Tillman...	Seneca Falls, N. Y....	April 17, 1844
Stoves, ash pit of.....	William Butcher.....	Philadelphia, Pa....	Nov. 29, 1845
Stoves, or bakers' for cooking purposes	Matthew Stewart.....	Philadelphia, Pa....	July 23, 1841
Stove, box, design for.....	John F. Rathbone.....	Albany, N. Y.....	July 10, 1846
Stove, box, design for.....	John F. Rathbone.....	Albany, N. Y.....	July 10, 1846
Stove, box, design for||.....	Samuel D. Vose.....	Albany, N. Y.....	July 25, 1846
Stoves, box hearths.....	William T. James.....	New York.....	April 23, 1824
Stoves, for carriages.....	Alexander McWilliams	Washington, D. C....	April 21, 1836
Stoves, cast iron.....	Robert Hetterick.....	Pennsylvania.....	June 11, 1793
Stoves, chimney.....	Charles Varlé.....	Fredericktown, Md..	July 1, 1814
Stoves, and chimney, construction of.....	Asa Graham.....	Rumford, Maine.....	Dec. 28, 1832
Stoves, chimney, furnaces, and steam engines.....	John J. Giraud.....	Baltimore, Md.....	Feb. 10, 1828
Stoves, chimney, rarifying.....	George Rogers.....	Northampton, Mass..	Dec. 18, 1816
Stoves, close.....	William Beach.....	Philadelphia, Pa....	Oct. 19, 1838
Stoves, coal.....	Henry Abbett.....	Pennsylvania.....	Jan. 24, 1799
Stoves, coal.....	Abiel Smith.....	N'th Providence, R. I.	Aug. 27, 1834
Stoves, coal.....	Henry Stanley.....	West Poughkeepsie, Vt.	Jan. 4, 1845
Stoves, coal.....	Charles Babcock.....	East Haddam, Conn..	June 10, 1845
Stoves, coal.....	Jordan L. Mott.....	New York.....	Nov. 1, 1845
Stoves, coal, applied to furnaces..	Eliphalet Nott.....	Schenectady, N. Y....	July 26, 1839
Stoves, coal or wood.....	Judson B. Galpin.....	New Haven, Conn....	Aug. 14, 1839
Stove columns, design for.....	Elias Johnson, Gilbert Geer, and B. Cox, assignees of Ezra Ripley.....	Troy, N. Y.....	Aug. 13, 1843
Stoves, Columbian.....	Joshua Talbot and John McCulloch.....	Smyrna, N. Y.....	Jan. 26, 1824
Stoves, conical.....	Stephen C. Roe.....	New York.....	Mar. 3, 1831
Stoves, conical.....	Robert Robertson.....	Albany, N. Y.....	June 16, 1836
Stoves, construction of.....	George F. Hopkins.....	New York city.....	Sept. 8, 1837
Stoves, construction of.....	Thomas Miles.....	Havana, N. Y.....	Sept. 25, 1837
Stoves, construction of.....	Henry H. Roath.....	Norwich, Conn.....	Nov. 4, 1837
Stove, cooking.....	Jonathan Low.....	Fitchburg, Mass.....	Feb. 24, 1812
Stove, cooking.....	Christopher Hoxie.....	Hudson, N. Y.....	May 3, 1816
Stove, cooking.....	John Adams.....	New York.....	April 16, 1818
Stove, cooking.....	James Lamb.....	Berlin, Ct.....	July 17, 1818
Stove, cooking.....	Palmer Jenkins.....	Hepbourn, N. Y.....	Feb. 16, 1819

* Reissued Oct. 17, 1835.

† Reissued Jan. 7, 1835, and Dec. 4, 1838.

‡ Antedated April 20, 1846.

§ Antedated March 21, 1846.

¶ Antedated July 15, 1843.

* Antedated March 8, 1837.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCES.	DATE ISSUED.
Stove, cooking.....	Israel Keyes.....	Putney, Vt.....	Feb. 23, 1820
Stove, cooking.....	Nathan Winslow.....	Portland, Me.....	May 3, 1820
Stove, cooking.....	Philolegus Holley.....	Red Hook, N. Y.....	Mar. 1, 1822
Stove, cooking.....	John Conant.....	Brandon, Vt.....	Dec. 13, 1823
Stove, cooking.....	David Little.....	Hagerstown, Md.....	Feb. 1, 1826
Stove, cooking.....	Robert C. Rouse.....	Athens, N. Y.....	Jan. 26, 1828
Stove, cooking.....	D. G. Garnsey.....	Pomfret, N. Y.....	Mar. 3, 1828
Stove, cooking.....	Abm. Fisher.....	Claremont, N. H.....	May 9, 1828
Stove, cooking.....	Joseph Hurd, jr.....	Boston, Mass.....	Nov. 10, 1829
Stove, cooking.....	Allen J. Barnitt.....	Louisville, Ky.....	June 11, 1829
Stove, cooking.....	William Naylor.....	New York.....	June 11, 1829
Stove, cooking.....	Ez. E. Bennet.....	Sandy Hill, N. Y.....	July 17, 1829
Stove, cooking.....	John Moore.....	Ackworth, N. H.....	May 7, 1830
Stove, cooking.....	Lewis & P. Peterson.....	Pittsburg, Pa.....	May 29, 1830
Stove, cooking.....	Andrew C. Bettis and Eli M. Gibbs.....	Norwich, N. Y.....	June 22, 1830
Stove, cooking.....	Eli Bates and David Updegraff.....	Mount Pleasant, O.....	July 20, 1831
Stove, cooking.....	Samuel Beals.....	Boston, Mass.....	Oct. 1, 1831
Stove, cooking.....	Horace Bartlett.....	Bridgeport, Ct.....	May 12, 1832
Stove, cooking.....	Henry A. Foot.....	Dover, N. H.....	Dec. 7, 1832
Stove, cooking.....	Theodore Budington.....	Bridgeport, Ct.....	Jan. 25, 1833
Stove, cooking.....	Lewis Kingsbury.....	Livonia, N. Y.....	Sept. 19, 1833
Stove, cooking.....	Elisha Town.....	Montpelier, Vt.....	Dec. 16, 1833
Stove, cooking.....	John G. Treadwell.....	Albany, N. Y.....	Jan. 23, 1834
Stove, cooking.....	Elisha D. Payne.....	New York.....	Mar. 8, 1834
Stove, cooking.....	John Harriman.....	Haverhill, Mass.....	Mar. 31, 1834
Stove, cooking.....	Thomas Whitson.....	Roxbury, Mass.....	April 11, 1834
Stove, cooking.....	George G. Prentiss.....	Smithfield, R. I.....	June 3, 1834
Stove, cooking.....	Philo P. Stewart.....	Elyria, Ohio.....	June 19, 1834
Stove, cooking.....	Horace Bartlett.....	Carmel, N. Y.....	Aug. 1, 1834
Stove, cooking.....	John Moffat.....	Buffalo, N. Y.....	Aug. 13, 1834
Stove, cooking.....	Samuel B. Sexton.....	Philadelphia, Pa.....	Aug. 14, 1834
Stove, cooking.....	William A. Hopkins.....	New York.....	Sept. 30, 1834
Stove, cooking.....	Carrington Wilson.....	New York.....	Oct. 10, 1834
Stove, cooking.....	Henry W. Camp.....	Owego, N. Y.....	Oct. 14, 1834
Stove, cooking.....	Levi Burnell.....	Elyria, Ohio.....	Nov. 25, 1834
Stove, cooking.....	James Childs.....	Henniker, N. H.....	Dec. 17, 1834
Stove, cooking.....	Paul Wing.....	Grafton, Mass.....	Feb. 25, 1835
Stove, cooking.....	Andrew Abbott.....	Portland, Me.....	April 2, 1835
Stove, cooking.....	Thaddeus Fairbanks.....	Caledonia co., Vt.....	April 14, 1835
Stove, cooking.....	Resor, Wade & Resor.....	Cincinnati, Ohio.....	May 29, 1835
Stove, cooking.....	Elijah Skinner.....	Sandwich, N. H.....	June 12, 1835
Stove, cooking.....	Legrand Fairman.....	Orleans co., N. Y.....	June 26, 1835
Stove, cooking.....	Thomas D. Burrall.....	Geneva, N. Y.....	June 26, 1835
Stove, cooking.....	Solomon Dickinson.....	Richmond, Ia.....	Aug. 15, 1835
Stove, cooking.....	Ezekiel Gore, jr.....	Guilford, Vt.....	Aug. 17, 1835
Stove, cooking.....	Edward N. Kent.....	Portland, Me.....	Aug. 17, 1835
Stove, cooking.....	J. Whiting & J. Mearns.....	Boston, Mass.....	Sept. 9, 1835
Stove, cooking.....	Ezekiel Daboll.....	North Canaan, Ct.....	Sept. 26, 1835
Stove, cooking.....	David Gage, ass'ee of Putnam Page.....	Marshall, N. Y.....	Sept. 26, 1835
Stove, cooking.....	Elnathan Samson.....	Pierpont, N. Y.....	Oct. 10, 1835
Stove, cooking.....	Horatio B. Wade.....	Cincinnati, Ohio.....	Oct. 17, 1835
Stove, cooking.....	Bennington Gill.....	New York city.....	Dec. 9, 1835
Stove, cooking.....	R. G. Cochran.....	Francistown, N. H.....	Feb. 3, 1836
Stove, cooking.....	Daniel Williams.....	Troy, N. Y.....	Feb. 3, 1836
Stove, cooking.....	B. & A. Titus.....	Marshall, N. Y.....	Feb. 25, 1836
Stove, cooking.....	John Liddle.....	Schoharie, Ohio.....	Mar. 12, 1836
Stove, cooking.....	Charles Vale.....	Newark, N. J.....	Mar. 18, 1836
Stove, cooking.....	O. Wilson.....	Concord, Mass.....	Mar. 23, 1836
Stove, cooking.....	B. H. Pearson.....	Warner, N. H.....	Mar. 31, 1836
Stove, cooking.....	Charles Vale.....	Newark, N. J.....	April 13, 1836

* Reissued Sept. 28, 1836.

† Reissued Nov. 21, 1840.

INSTRUMENT OR DISASTERS.	PATENTERS.	ASSIGNMENT.	WHEN ISSUED.
Stove, cooking.....	Jonas Kendall, ass'ee of J. Perkins.....	Inswich, Mass.....	April 28, 1836
Stove, cooking*.....	E. G. Currier.....	Warner, N. H.....	June 2, 1836
Stove, cooking.....	E. G. Currier.....	Warner, N. H.....	June 2, 1836
Stove, cooking.....	Charles Higgins.....	Turner, Me.....	June 2, 1836
Stove, cooking.....	William A. Arnold.....	Northampton, Mass.....	June 16, 1836
Stove, cooking.....	Gould Throp.....	New York city.....	June 25, 1836
Stove, cooking.....	Thomas Shaw.....	North Yarmouth, Me.....	June 25, 1836
Stove, cooking.....	Sebastian H. Laciard.....	Muncungy, Pa.....	June 28, 1836
Stove, cooking.....	P. F. Perry.....	Rockingham, Vt.....	June 28, 1836
Stove, cooking.....	Beriah Douglass.....	Albany, N. Y.....	June 30, 1836
Stove, cooking.....	Asabel Lear.....	Wendall, N. H.....	July 1, 1836
Stove, cooking.....	E. Andrews & S. Austin.....	Bradford, N. H.....	July 1, 1836
Stove, cooking.....	Elisha N. Pratt.....	Albany, N. Y.....	July 1, 1836
Stove, cooking.....	Chester Granger.....	Pottersford, Vt.....	July 2, 1836
Stove, cooking.....	P. C. Traver.....	West Troy, N. Y.....	July 2, 1836
Stove, cooking.....	Elisha Lyman.....	East Hampton, Mass.....	July 2, 1836
Stove, cooking.....	John Whiting.....	Boston, Mass.....	Oct. 20, 1836
Stove, cooking.....	S. B. Spalding.....	Brandon, Vt.....	Nov. 17, 1836
Stove, cooking.....	Benjamin H. Wood.....	Bath, Steuben co., N. Y.....	Jan. 31, 1837
Stove, cooking.....	Abraham T. Mixell.....	Belvidere, N. Y.....	July 19, 1837
Stove, cooking.....	Edwin Reed.....	W. Bridgewater, Mass.....	July 29, 1837
Stove, cooking.....	James Richardson.....	Foultney, Vt.....	July 29, 1837
Stove, cooking.....	Samuel Utter.....	New York city.....	Aug. 8, 1837
Stove, cooking.....	James Wilson.....	New York city.....	Aug. 15, 1837
Stove, cooking.....	John S. Leavitt.....	Turner, Me.....	Aug. 31, 1837
Stove, cooking.....	Elijah Skinner.....	Sandwich, N. H.....	Oct. 18, 1837
Stove, cooking.....	James N. Olney.....	New York city.....	Nov. 20, 1837
Stove, cooking.....	David Hastings & So- lomon Sikes.....	Deerfield, Mass.....	Nov. 23, 1837
Stove, cooking.....	Nathaniel Walker.....	Dighton, Mass.....	Dec. 1, 1837
Stove, cooking.....	Jona'n C. Hathaway.....	Lancaster, Pa.....	Dec. 7, 1837
Stove, cooking.....	Jease Hutchinson, jr.....	Lyonn, Mass.....	Dec. 20, 1837
Stove, cooking.....	Carington Wilson, jr.....	New York city.....	Dec. 29, 1837
Stove, cooking.....	E. L. Parshley and B. Furbish.....	Brunswick, Me.....	Jan. 9, 1838
Stove, cooking.....	Horace V. Teall.....	Canajoharie, N. Y.....	Jan. 20, 1838
Stove, cooking.....	Jefferson Cross.....	Eaton, N. Y.....	June 27, 1838
Stove, cooking.....	Garet G. Hermance.....	Poughkeepsie, N. Y.....	July 24, 1838
Stove, cooking.....	Simeon Heywood and L. P. Fisher.....	Claremont, N. H.....	Aug. 29, 1838
Stove, cooking.....	Jordon L. Mott.....	New York city.....	Sept. 19, 1838
Stove, cooking.....	Daniel Tisdale.....	Canton, Mass.....	Nov. 12, 1838
Stove, cooking.....	Darius Buck.....	Albany, N. Y.....	May 20, 1839
Stove, cooking.....	Micah Ketcham.....	Boston, Mass.....	May 25, 1839
Stove, cooking.....	Elihu Smith.....	Troy, N. Y.....	Aug. 9, 1839
Stove, cooking.....	James Devine.....	Rochester, N. Y.....	Aug. 24, 1839
Stove, cooking.....	Elbridge McCollum.....	Weare, N. H.....	Sept. 20, 1839
Stove, cooking.....	Noble Peck.....	Carmel, N. Y.....	Sept. 30, 1839
Stove, cooking.....	George D. Boyce.....	W. Wareham, Mass.....	Dec. 27, 1839
Stove, cooking.....	William Jeanes.....	Philadelphia, Pa.....	May 25, 1840
Stove, cooking.....	William Gallup.....	Norwalk, Ohio.....	June 10, 1840
Stove, cooking.....	Samuel W. Cole.....	Chelsea, Mass.....	Aug. 25, 1840
Stove, cooking.....	James Still.....	Zanesville, Ohio.....	Sept. 19, 1840
Stove, cooking.....	Samuel L. Chase.....	Woodstock, Vt.....	Sept. 25, 1840
Stove, cooking.....	R. G. Cochran.....	Francistown, N. H.....	Oct. 10, 1840
Stove, cooking.....	James Parmele.....	Ogden, N. Y.....	Oct. 14, 1840
Stove, cooking.....	David H. Hilliard.....	Cornish, N. H.....	Nov. 26, 1840
Stove, cooking.....	Jordon L. Mott.....	New York.....	Dec. 17, 1840
Stove, cooking.....	Wm. Melsheimer.....	Philadelphia, Pa.....	Dec. 19, 1840
Stove, cooking.....	Joel Green.....	Rochester, N. Y.....	Dec. 28, 1840
Stove, cooking.....	Clark H. Robinson.....	Uniontown, Pa.....	Feb. 13, 1841
Stove, cooking.....	M. C. Sadler.....	Brockport, N. Y.....	April 10, 1841

* Additional improvement, Nov. 8, 1838.

† Released June, 8, 1840; A. Packard, ass'ee.

‡ Disc. May 1, '46; releas'd Nov. 14, '46.

§ Add'l imp't, Feb. 18, '41. ¶ Disc. Mar. 28, '48. † Releas. Aug. 11, '41.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Stove, cooking.....	John B. Bissell.....	Oakville, N. Y.....	April 16, 1841
Stove, cooking.....	Hiram Blanchard.....	Aquaackanonk, N. J.....	April 27, 1841
Stove, cooking.....	Samuel L. Chase.....	Woodstock, Vt.....	Aug. 11, 1841
Stove, cooking.....	Wm. A. Shepard.....	Waterville, Me.....	Aug. 11, 1841
Stove, cooking.....	James Root.....	Cincinnati, Ohio.....	Sept. 11, 1841
Stove, cooking.....	Nelson W. Fisk, ass'ee of A. D. Fisk.....	New York.....	Nov. 10, 1841
Stove, cooking.....	William B. Zeagler.....	Huntington, Pa.....	Feb. 21, 1842
Stove, cooking.....	Samuel B. Sexton.....	Baltimore, Md.....	April 20, 1842
Stove, cooking.....	Anson Atwood.....	Troy, N. Y.....	May 4, 1842
Stove, cooking.....	William Beebe.....	New York, N. Y.....	July 8, 1842
Stove, cooking.....	Erastus Buck.....	Nunda, N. Y.....	Aug. 6, 1842
Stove, cooking.....	John Curtis.....	Auburn, N. Y.....	Jan. 27, 1843
Stove, cooking.....	James Greer.....	Dayton, Ohio.....	May 12, 1843
Stove, cooking.....	Charles Postley.....	New York.....	June 9, 1843
Stove, cooking.....	Pitner Emmitt.....	York, Pa.....	June 14, 1843
Stove, cooking.....	Albert D. Hart.....	Pittsfield, Mass.....	July 8, 1843
Stove, cooking*.....	Joel Green.....	Rochester, N. Y.....	Aug. 11, 1843
Stove, cooking.....	J. J. Anderson.....	Putnam, Ohio.....	Aug. 17, 1843
Stove, cooking.....	Samuel B. Sexton.....	Baltimore, Md.....	Sept. 23, 1843
Stove, cooking.....	Henry T. Butler, ass'ee of Laban Eddy.....	Taunton, Mass.....	Oct. 18, 1843
Stove, cooking.....	Benjamin T. Roney.....	Milton, Pa.....	Oct. 25, 1843
Stove, cooking.....	Alpheus Cooper.....	Danville, Pa.....	Oct. 25, 1843
Stove, cooking.....	John E. Thomas.....	Albany, N. Y.....	Nov. 6, 1843
Stove, cooking, design for.....	Alanson Skinner.....	Brownsville, N. Y.....	Sept. 14, 1843
Stoves, cooking.....	James Young & Elmon Parker.....	Philadelphia, Pa.....	Feb. 12, 1844
Stoves, cooking†.....	Jordon L. Mott.....	New York.....	Feb. 12, 1844
Stoves, cooking.....	Simon Peters.....	Schenectady, N. Y.....	Feb. 12, 1844
Stoves, cooking.....	S. S. Jones.....	Philadelphia, Pa.....	Feb. 20, 1844
Stoves, cooking.....	Ashley Hotchkin.....	Maryland, N. J.....	Feb. 29, 1844
Stoves, cooking.....	Samuel Bentz.....	Boonsborough, Md.....	Mar. 9, 1844
Stoves, cooking.....	Roswell Bush.....	Rochester, N. Y.....	April 4, 1844
Stoves, cooking.....	Abner Leland.....	Milton, Pa.....	April 4, 1844
Stoves, cooking.....	Friedrick Kesselmeier.....	Wooster, O.....	April 13, 1844
Stoves, cooking.....	Peter Mills.....	Binghampton, N. Y.....	April 30, 1844
Stoves, cooking.....	Isaac Straub.....	Cincinnati, Ohio.....	June 5, 1844
Stoves, cooking.....	William & R. P. Re- sor, assignees of Tho- mas Bent.....	Cincinnati, Ohio.....	June 5, 1844
Stoves, cooking.....	James White.....	Milton, Pa.....	June 10, 1844
Stoves, cooking.....	Calvin Fulton.....	Rochester, N. Y.....	June 10, 1844
Stoves, cooking†.....	John C. Hermance.....	Schenectady, N. Y.....	June 13, 1844
Stoves, cooking.....	Henry W. Camp.....	Oswego, N. Y.....	June 24, 1844
Stoves, cooking.....	James Wager.....	Troy, N. Y.....	July 9, 1844
Stoves, cooking.....	James Lewis.....	Amsterdam, N. Y.....	Sept. 20, 1844
Stoves, cooking.....	John W. Riggs.....	Fort Plain, N. Y.....	Oct. 30, 1844
Stoves, cooking.....	James H. Lyon.....	Schenectady, N. Y.....	June 18, 1844
Stoves, cooking.....	Adam Keller.....	Philadelphia, Pa.....	Dec. 7, 1844
Stoves, cooking.....	Archibald Wieting.....	Middletown, Pa.....	Dec. 16, 1844
Stoves, cooking‡.....	William L. Potter.....	Clinton Park, N. Y.....	Dec. 19, 1844
Stoves, cooking.....	Charles Wolf.....	Cincinnati, O.....	Jan. 10, 1845
Stoves, cooking.....	Robert Wilson.....	Williamsport, Pa.....	Feb. 20, 1845
Stoves, cooking.....	John F. Davy.....	Troy, N. Y.....	Mar. 12, 1845
Stoves, cooking.....	Gould Thorp.....	New York.....	Mar. 26, 1845
Stoves, cooking.....	Henry N. Gros.....	Palatine Bridge, N. Y.....	May 13, 1845
Stoves, cooking.....	Theophilus Smith.....	Galway, N. Y.....	June 10, 1845
Stoves, cooking.....	E. Johnson & D. B. Cox.....	Troy, New York.....	July 22, 1845
Stoves, cooking.....	Hosea Huntley.....	Rochester, N. Y.....	Aug. 9, 1845
Stoves, cooking.....	Low & Leake.....	Albany, N. Y.....	Aug. 20, 1845
Stoves, cooking.....	B. T. Roney.....	Attleborough, Pa.....	Sept. 17, 1845
Stoves, cooking.....	Charles J. Woolson.....	Cleveland, Ohio.....	Sept. 9, 1845

*Disclaimer, May 8, '44. †Antedated, Dec. 1, '43. ‡Antedated June 7, '44. §Add. improv. July 5, '45.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEAT MONTH.
Stoves, cooking.....	J. B. Challar and E. Jones and P. Low..	Troy, New York..	Nov. 8, 1845
Stoves, cooking.....	R. Peck and J. W. Cochrane.....	Attica, New York..	Nov. 12, 1845
Stoves, cooking.....	John Porter.....	Gottysburg, Pa....	Nov. 18, 1845
Stoves, cooking.....	Eli C. Robinson.....	Troy, N. Y.....	Nov. 26, 1845
Stoves, cooking.....	Samuel Pierce.....	Peekskill, N. Y....	Dec. 6, 1845
Stoves, cooking.....	Samuel Myers.....	Schenectady, N. Y.	Dec. 31, 1845
Stove, cook.....	W. H. Allen and J. Slocum.....	Wellaburg, Va.... } Brownsville, Pa.... }	Sept. 10, 1846
Stove, cooking.....	Jacob Cornelison.....	Danville, Pa.....	Sept. 26, 1846
Stove, cooking.....	Adam C. Conde.....	Schenectady, N. Y.	Oct. 3, 1846
Stove, cooking.....	William B. Treadwell	Albany, N. Y.....	Oct. 7, 1846
Stove, cooking.....	D. G. Stafford.....	Syracuse, N. Y....	Aug. 26, 1846
Stove, cooking.....	Loftis Wood.....	New York, N. Y....	Aug. 26, 1846
Stove, cooking.....	Samuel Winrott.....	Littlestown, Pa....	Dec. 15, 1846
Stove, cooking.....	John Lee.....	Wellsville, Ohio....	May 16, 1846
Stove, cooking.....	J. S. Silver.....	New York, N. Y....	Dec. 22, 1846
Stove, cooking.....	James R. Stafford....	Cleveland, Ohio....	Dec. 28, 1846
Stove, cooking.....	Joseph Lanbach.....	Harrisburg, Pa....	Feb. 10, 1846
Stove, cooking.....	George M. Norton....	Rochester, N. Y....	July 2, 1846
Stove, cooking.....	Samuel Graves.....	Auburn, N. Y.....	Feb. 10, 1846
Stove, cooking.....	R. D. Granger.....	Albany, N. Y.....	Feb. 20, 1846
Stove, cooking.....	Bancroft Woodcock..	Wheeling, Va.....	Aug. 12, 1846
Stove, cooking, design for.....	Samuel D. Vose.....	Albany, N. Y.....	Aug. 18, 1846
Stove, cooking, design for.....	Samuel D. Vose.....	Albany, N. Y.....	Aug. 18, 1846
Stove, cooking, design for.....	Wm. Jackson.....	Syracuse, N. Y....	July 25, 1846
Stove, cooking, design for.....	John F. Rathbone....	Albany, N. Y.....	July 10, 1846
Stove, cooking, design for.....	Aug. Quackenboss, assignee of S. W. Gibbs	Albany, N. Y.....	Oct. 3, 1846
Stove, cooking, design for.....	Peter Low.....	Troy, N. Y.....	Oct. 10, 1846
Stove, cooking, design for.....	William Resor.....	Cincinnati, Ohio...	May 23, 1846
Stove, cooking, design for.....	Jesse C. Potts, assignee of L. Gravline....	Albany, N. Y....	July 10, 1846
Stove, cook, design for.....	John M. French, assignee of Calvin Fulton.....	Rochester, N. Y....	Aug. 18, 1846
Stove, cooking, air furnace, oven.	Oliver Davison.....	Johnstown, N. Y..	Aug. 25, 1846
Stove, cooking, air tight, design for	John F. Rathbone, assignee of J. E. Thomas	Albany, N. Y....	July 10, 1846
Stoves, cooking and air-heating..	Benjamin Shepard...	Boston, Mass.....	Sept. 1, 1843
Stove, cooking, bake.....	Henry Caldwell.....	Oswego, N. Y.....	Oct. 14, 1844
Stove cooking, baking.....	Hiram G. Phelps....	Johnstown, N. Y..	Mar. 29, 1835
Stove, cooking, baking, boiling and steaming.....	Eliphalet B. Coleman	New Haven, Conn..	May 13, 1814
Stove, cooking, and boilers.....	Gabriel N. Phillips...	Goshen, N. Y.....	Feb. 6, 1813
Stove, cooking, boiling.....	Henry Abbott.....	Philadelphia, Pa....	Mar. 30, 1813
Stove, cooking, boiling, and steam	Erastus Warner.....	.....	Sept. 12, 1815
Stove, cooking, bottom boiler....	Benjamin Simonds, jr.	Bedford, Mass.....	Oct. 15, 1831
Stoves, cooking, burning bituminous coal, &c.....	William B. Lawrence	Cincinnati, Ohio...	Oct. 14, 1840
Stoves, cooking or caboses.....	Loftis Wood.....	New York.....	Aug. 11, 1841
Stove, cooking, cast iron.....	Albertus Swain.....	New York.....	April 5, 1817
Stove, cooking, coal.....	David Gassner.....	New York.....	July 11, 1832
Stove, cooking, coal.....	William Kinney.....	Louisville, Ky.....	July 29, 1837
Stove, cooking, coal, anthracite..	William Davis and R. W. Lord.....	New York.....	Nov. 23, 1839
Stove, cooking, coal, anthracite..	Walter Bryant.....	Boston, Mass.....	Sept. 13, 1831
Stove, cooking, coal, anthracite, or wood.....	Hezekiah Steel.....	Hudson, N. Y.....	Nov. 19, 1833
Stove, cooking, coal, Lehigh....	William Shaw.....	Albany, N. Y.....	Dec. 31, 1833
Stove, cooking, coal or wood.....	C. Shermershorn....	New York.....	June 33, 1829
Stove, cooking, combination.....	Leopold Gotta.....	Huntington, Pa....	Feb. 18, 1833
	Jordon L. Mott.....	New York city.....	Nov. 20, 1833

* Antedated, Aug. 30, 1845. † Antedated, Aug. 9, 1845. ‡ Antedated, June 1, 1846. § Antedated, Jan. 24, 1846.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN GRANTED.
Stove, cooking, combining an elevated oven with.....	Lathrop S. Bacon....	Le Roy, N. Y.....	Jan. 23, 1846
Stove, cooking, construction*....	Philip Wilcox.....	Springfield, Mass....	Sept. 13, 1838
Stove, cooking, correcting bad smell.....	Eliphalet Nott.....	Schenectady, N. Y.	Jan. 7, 1835
Stove, cooking, cylindrical, sheet iron, &c.....	Emma Steinhauer....	Philadelphia, Pa....	Feb. 3, 1831
Stove, cooking, or digestive furnace	Henry L. Bidwell....	Berlin, Conn.....	Mar. 8, 1833
Stove, cooking, domestic.....	Jos. R. Page.....	Philadelphia, Pa....	Mar. 24, 1827
Stove, cooking, double furnace....	Josiah Richards.....	Claremont, N. H....	Aug. 5, 1829
Stove, cook, double oven.....	R. D. Granger.....	Albany, N. Y.....	Mar. 7, 1846
Stoves, cooking, with double fire-places.....	Reuben Jackson....	Zanesville, Ohio....	Mar. 19, 1840
Stoves, cooking, draught arranging	John L. Lathrop....	Provincetown, Mass	Dec. 31, 1839
Stoves, cooking, draught, &c., in	Horace Strickland....	Bradford, Vt.....	June 27, 1840
Stove, cooking, drum.....	Andrew Sherwood....	New York.....	April 25, 1841
Stoves, cooking, with elevated ovens.	John P. Williston, and Willard A. Arnold.	Northampton, Mass	Nov. 16, 1839
Stoves, cooking, with elevated ovens.....	Lester Tilden.....	Barre, Vt.....	July 18, 1840
Stoves, cooking, elevated ovens with.....	Moses Bartholomew.	Vershire, Vt.....	July 2, 1842
Stoves, cooking, family.....	Joseph Tulley.....	Frederick county, Va.	May 17, 1814
Stoves, cooking, and fire-place...	Edward Potter.....	Providence, R. I....	May 8, 1832
Stoves, cooking, and fire-place...	Joshua Douglass....	South Durham, Me.	Nov. 14, 1835
Stoves, cooking, and fire-place, double.....	Thomas McCarty....	Elmira, N. Y.....	Jan. 23, 1833
Stoves, cooking, and fire-place, and oven.....	John Rice.....	Hartland, Vt.....	Dec. 6, 1817
Stoves, cooking, flat.....	Joel Rathbone.....	Albany, N. Y.....	Mar. 6, 1835
Stoves, cooking, and Franklin....	James Wilson.....	New York.....	Mar. 13, 1824
Stoves, cooking, and Franklin....	Thomas Wentworth..	Oswego, N. Y.....	May 18, 1825
Stoves, cooking, and Franklin....	George Richards....	Providence, R. I....	Sept. 9, 1829
Stoves, cooking, and Franklin....	Isaac McNavy.....	Stafford, Conn....	Mar. 24, 1835
Stoves, cooking, and Franklin, reflecting.....	Samuel W. Phelps....	Cincinnati, Ohio....	July 16, 1834
Stoves, cooking, Franklin.....	Abner R. Ring.....	Parma, N. Y.....	Dec. 12, 1839
Stoves, cooking, Franklin.....	Joel Houghton.....	Ogden, N. Y.....	May 12, 1840
Stoves, cooking, Franklin.....	Reuben Houghton....	Clarkson, N. Y....	Aug. 25, 1820
Stove, cooking, and galley.....	Benjamin Spratley...	Portsmouth, Va....	Sept. 25, 1837
Stove, cooking, and galley.....	James Baron.....	Philadelphia, Pa....	Oct. 6, 1827
Stove, cooking, heat to.....	Jonathan G. Hathaway	Painesville, Ohio....	Dec. 7, 1837
Stove, cooking, heat to.....	Stephen J. Gold and Job S. Gold.....	New York city....	June 20, 1838
Stove, cooking, heating.....	William B. Kimball..	Petersborough, N. H.	July 19, 1837
Stove, cooking, heating.....	Rufus S. Payne.....	W. Springfield, Mass.	July 31, 1837
Stove, cooking, heating.....	Philip Wilcox.....	Springfield, Mass....	Sept. 12, 1837
Stove, cooking, heating buildings	Washington Auld and James Cox.....	Philadelphia, Pa....	May 30, 1837
Stoves, cooking and heating.....	Alexander F. Bean...	Woodstock, Vt.....	July 8, 1841
Stoves, cooking, heating, and illuminating.....	Andrew Walker, jr....	Unity, N. H.....	June 27, 1842
Stoves, cooking and heating.....	Laommi Bailey.....	Boston, Mass.....	Mar. 26, 1844
Stoves, cooking, improvement in.	Payson, Burch, and Davis.....	Eaton Village, N. Y.	Nov. 24, 1848
Stoves, cooking, improvement in.	Conrad Samuel, and George J.....	Somerset, Pa.....	Dec. 3, 1846
Stove, cooking, kitchen.....	Andrew Sherwood....	New York.....	April 25, 1811
Stove, cooking, kitchen.....	John Spencer.....	Albany, N. Y.....	Feb. 2, 1812
Stove, cooking, kitchen, portable.	James Truman.....	Philadelphia, Pa....	Dec. 3, 1811
Stove, cooking, and oven.....	John R. Smith.....	New Haven, Conn....	Mar. 10, 1838
Stove, cooking, and parlor.....	Nicholas Smith.....	New Hampton, N. H.	Oct. 27, 1836
Stove, cooking, plain, plate or box	Eliphalet Nott.....	Schenectady, N. Y.	April 22, 1835
Stove, cooking, portable.....	Stephen J. Gold.....	Cornwall, Conn....	Aug. 29, 1832

* Antedated, August 30, 1838.

† Additional Improvement Dec. 5, 1836.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	DATE GRANTED.
Stove, cooking, portable.....	Thomas Whitson and Gustavus E. Haynes	Roxbury, Mass....	Nov. 19, 1834
Stove, cooking, portable.....	John Igget.....	Albany, N. Y.....	Jan. 16, 1835
Stove, cooking, premium, railway*	Peregrine Williamson	Philadelphia, Pa....	Feb. 16, 1839
Stove, cooking, preventing waste of heat.....	Eliphalet Nott.....	Schenectady, N. Y..	Jan. 9, 1834
Stove, cooking, railway†.....	Isaac B. Bucklin.....	West Troy, N. Y....	July 9, 1836
Stove, cooking, railway.....	Anson Atwood.....	Troy, N. Y.....	April 10, 1839
Stove, cooking, railway.....	R. P. Butrick.....	Lockport, N. Y....	Sept. 18, 1841
Stove, cooking, railway.....	Chollar, Jones & Low, assignees of Chollar & Parmelee.....	West Troy, N. Y....	July 11, 1844
Stove, cooking, rarifying oven...	Samuel W. Phelps...	Cincinnati, Ohio....	July 16, 1834
Stove, cooking, reflection of caloric	John Burch.....	Jefferson co., N. Y..	April 22, 1835
Stove, cooking, revolving‡.....	Henry Stanley.....	Poultney, Vt.....	Dec. 17, 1839
Stove, self-heat retaining.....	Moffat and Taintor...	Buffalo, N. Y.....	July 17, 1835
Stoves, cooking, semi-circular...	Thomas O. Savre....	Elizabethtown, N. J.	Mar. 23, 1842
Stove, cooking, shifting.....	Henry Cressman.....	Philadelphia, Pa....	Feb. 7, 1839
Stove, cooking, steam.....	Josiah Noyes.....	Herkimer, N. Y....	June 21, 1811
Stoves, cooking, steam apparatus for.....	Peter Getz.....	Lancaster, Pa.....	Jan. 11, 1840
Stoves, cooking, still, and boilers.	John J. Giraud.....	Baltimore, Md.....	April 19, 1830
Stoves, cooking, for summer.....	Anson Atwood.....	Troy, N. Y.....	June 30, 1836
Stoves, cooking, for summer and winter.....	Philo P. Stewart.....	New York city.....	Sept. 12, 1836
Stoves, cooking, three boiler, flat.	Silvester Parker.....	Troy, N. Y.....	Jan. 16, 1835
Stoves, cooking, tubular.....	Jordon L. Mott.....	New York, N. Y....	Mar. 23, 1842
Stoves, cooking, utensils for.....	Salmon C. Riley.....	New York, N. Y....	Aug. 31, 1842
Stoves, cooking, valve off||.....	Hiram Root.....	Deerfield, Mass....	Sept. 3, 1839
Stoves, cooking, and warming rooms.....	Ernst G. Augustin...	New York.....	July 6, 1835
Stoves, cooking, and warming rooms.....	John Morris.....	Derby, Conn.....	Nov. 4, 1837
Stoves, cooking, and warming rooms.....	Josiah Hill.....	Andover, Mass....	Oct. 16, 1836
Stoves, covering the rods used to bind.....	John C. Parry.....	Pittsburg, Pa.....	June 12, 1835
Stoves, culinary and air heating..	Benjamin Shepard...	Boston, Mass.....	May 30, 1842
Stoves, diffusing heat and economizing coal.....	John Scott.....	Philadelphia, Pa....	April 8, 1840
Stoves, draught of, changing by an elliptical valve.....	Horace Bushnell....	Hartford, Conn....	June 21, 1836
Stove, double oven, air tight, design for§.....	G. W. and H. Sizer..	Springfield, Mass...	July 25, 1846
Stove, double oven, air tight, design for§.....	G. W. and H. Sizer..	Springfield, Mass...	July 25, 1846
Stoves, double, for heating apartments.....	John Dunley.....	Richmond, Va.....	Jan. 24, 1839
Stoves, dumb, for parlors.....	John G. Treadwell...	Albany, N. Y.....	June 30, 1836
Stoves, economical.....	John Graham.....	New York.....	Nov. 9, 1815
Stoves, eleven plate.....	Charles Postley.....	New York.....	March 7, 1814
Stoves, elevated ovens, with.....	Samuel B. Spaulding..	Brandon, Vt.....	Mar. 30, 1843
Stoves, fire-chambers of, mode of constructing.	Benjamin F. and Job S. Gold.....	New York.....	July 15, 1840
Stoves, &c., fire-chambers of...	Matthew Stewart, jr..	Philadelphia, Pa....	Nov. 16, 1841
Stoves, for fire-places.....	H. Katusowski and F. P. Wierbicki.....	New York.....	Dec. 11, 1845
Stoves, and fire-place.....	John H. Lotz.....	Salisbury, Conn....	Mar. 18, 1818
Stoves, and fire-place.....	Lemuel Hitchcock...	Weathersfield, Vt....	May 4, 1822
Stoves, and fire-place.....	Daniel Sutherland...	Liabon, Maine.....	Oct. 31, 1835
Stoves, and fire-place.....	C. Hendricks and W. Elwell.....	Gardner, Maine....	Feb. 25, 1836
Stoves, and fire-place.....	Jordon L. Mott.....	New York.....	Oct. 11, 1836

* Reissued Sept. 30, 1840. † Reissued Aug. 27, 1840. ‡ Reissued Dec. 2, 1835. Nov. 16, 1836, and Nov. 20, 1836.
§ Antedated March 3, 1839. § Antedated Jan. 24, 1846.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Stoves, and fire-place.....	Joseph Hurd, jr.....	Stoneham, Mass....	June 23, 1838
Stoves, or fire-place, circular opening.	Richard Berrian and Francis Class.....	New York.....	Aug. 31, 1820
Stoves, foot.....	Abraham H. Quincy.	Boston, Mass.....	June 13, 1812
Stoves, foot.....	Allen Greely.....	Oxford, Mass.....	Dec. 23, 1815
Stoves, foot.....	Julia Plantou.....	Philadelphia, Pa....	Nov. 4, 1822
Stoves, foot.....	George W. Robinson.	New York.....	June 2, 1827
Stoves, foot.....	Ezekiel Daboll.....	Canaan, Conn.....	July 1, 1836
Stoves, Franklin.....	James Wilson.....	Poughkeepsie, N. Y.	March 9, 1816
Stoves, Franklin.....	John F. Van Sicler...	Poughkeepsie, N. Y.	July 3, 1816
Stoves, Franklin.....	George W. Brown.....	New York.....	Dec. 6, 1816
Stoves, Franklin.....	William Cowan.....	Watertown, N. Y....	June 16, 1828
Stoves, Franklin, burning coal...	John Harryman.....	Haverhill, Mass....	Sept. 29, 1836
Stove, Franklin, design for*	David Petree.....	Little Falls, N. Y....	Mar. 23, 1836
Stoves, and furnace.....	Samuel D. Vose.....	Albany, N. Y.....	July 25, 1846
Stoves, furnace.....	Ephraim Baldwin...	Gibbonsville, N. Y....	July 19, 1832
Stoves, furnace.....	Harvey Hubbard...	Berlin, Conn.....	Mar. 25, 1835
Stoves, furnace.....	James Atwater.....	New Haven, Conn....	April 19, 1834
Stoves, globe, or radiator.	James Atwater.....	New Haven, Conn....	June 20, 1835
Stoves, grain, drying.....	Walter Hunt.....	New York.....	Feb. 8, 1834
Stoves and grates.....	David Ellicott.....	Maryland.....	May 1, 1801
Stoves and grates.....	Oliver Evans.....	Pennsylvania.....	Jan. 16, 1800
Stoves and grates.....	William Mix.....	Prospect, Conn.....	May 14, 1834
Stoves and grates.....	Elkanah Ingalls.....	Providence, R. I....	April 22, 1835
Stoves and grates.....	Eli C. Robinson.....	Troy, N. Y.....	June 30, 1838
Stoves and grates, boilers & ovens	Caleb Slade.....	Troy, N. Y.....	Nov. 11, 1837
Stoves and grates, or furnace....	James Atwater.....	New Haven, Conn....	Aug. 23, 1833
Stoves, heating apartments.....	Allen Pollock.....	Boston, Mass.....	June 17, 1808
Stoves, heating apartments.....	Allen Pollock.....	Boston, Mass.....	June 30, 1808
Stoves, heating apartments.....	Charles W. Peckham.	New Haven, Ct.....	May 16, 1835
Stoves, heating irons for tailors' & hatters' use.....	Philip Wilcox.....	Springfield, Mass...	July 31, 1837
Stoves, heating irons for tailors ..	John Lewis.....	Derby, Conn.....	Aug. 17, 1835
Stoves, heating the air of apartments.....	Bartholo'w W. Tabor.	Falmouth, Mass....	June 10, 1837
Stove, or heating apparatus.....	George S. Howe.....	New York.....	July 10, 1840
Stove for heating rooms.....	John Smart.....	Philadelphia, Pa....	Mar. 28, 1844
Stoves, heating buildings.....	John H. B. Latrobe.	Baltimore, Md.....	Sept. 5, 1846
Stove for heating rooms.....	Herbert H. Stimpson.	Boston, Mass.....	Jan. 20, 1843
Stoves, heating water, and washing clothes.....	Henry Slade.....	Chelsea, Mass.....	June 6, 1846
Stoves, hot air.....	Thomas Woolsen...	Amherst, N. H.....	July 3, 1812
Stove, hot air.....	Moses Pond.....	Boston, Mass.....	Sept. 1, 1843
Stoves, hot air, improvement in..	E. D. Loveland.....	New York, N. Y....	July 14, 1846
Stoves, improvement in.....	E. Backus.....	Brooklyn, N. Y....	July 28, 1846
Stoves, improvement in air-heating	L. Morse and W. T. Lewis.....	Athol, Mass.....	May 16, 1846
Stove, improvement in constructing	Benjamin Shepard...	Boston, Mass.....	Dec. 23, 1846
Stoves, improvement in.....	James Wilson.....	New York, N. Y....	May 16, 1846
Stoves, improvement in, for heating apartments.....	C. H. Rogers & S. H. Hancox.....	Troy, N. Y.....	Oct. 10, 1846
Stove, improvement in.....	James Macgregor, jr.	Wilton, N. Y.....	Jan. 7, 1846
Stove, improved double ovens.....	William Shaw.....	Albany, N. Y.....	June 27, 1846
Stove, improved.....	William Cobb.....	Albany, N. Y.....	June 16, 1846
Stoves and kettles for making varnish, &c.....	Benj. F. DeWolf....	Lansingburg, N. Y.	Jan. 15, 1846
Stoves, knobs or handles.....	Harmon Hibbard...	Attica, N. Y.....	June 17, 1840
Stoves, leading flame by wire gauze	Jordon L. Mott.....	New York.....	July 21, 1835
Stoves, Lehigh coal.....	Samuel Morey.....	Oxford, N. H.....	Jan. 20, 1819
Stoves, Lehigh coal.....	Robert McMinn.....	Philadelphia, Pa....	June 24, 1822
Stoves, Lehigh coal.....	Philip S. Mingle.....	Philadelphia, Pa....	Oct. 24, 1822
Stove, lyre, ornament, design for.	John Lovatt.....	Philadelphia, Pa....	June 16, 1825
	Wm. & R. P. Resor..	Cincinnati, Ohio....	Oct. 10, 1846

* Antedated March 21, 1846. † Antedated Feb. 26, 1838. ‡ Antedated Dec. 22, 1845. § Antedated Jan. 16, 1846.

INVENTIONS OR DISCOVERIES.	PATENTERS.	PLACES.	DATE GRANTED.
Stoves, manufacturing	Elias W. Newton....	Middletown, Conn....	Jan. 9, 1826
Stoves, non-radiating hot air	Benjamin Blaney....	Boston, Mass.....	Sept. 8, 1827
Stove, ornamental, design for	Samuel H. Ransom ..	Albany, N. Y.	July 10, 1845
Stove, ornamental, design for*	Jagger, Treadwell and Perry, assignees of E. Ripley.....	Troy, N. Y.....	July 14, 1845
Stoves, open.....	John F. Gould.....	Newburyport, Mass.	Feb. 1, 1808
Stoves, open.....	Jos. Howe & William Lanckester	Boston, Mass.....	Nov. 25, 1812
Stoves, open.....	John J. Pierce.....	Springfield, Mass...	Mar. 11, 1822
Stoves, parlor, and fire-place.....	William Lanckester...	Boston, Mass.....	Nov. 24, 1812
Stoves, parlor.....	Beriah Douglass.....	Albany, N. Y.....	June 30, 1836
Stoves, parlor.....	Jordon L. Mott.....	New York city.....	Dec. 7, 1837
Stoves, parlor.....	John Backus & Ebenezer Backus.....	New York.....	Feb. 18, 1841
Stoves, parlor.....	Joseph Feinour, jr....	Philadelphia, Pa....	Oct. 11, 1841
Stoves, parlor.....	James Pedder.....	Philadelphia, Pa....	Sept. 30, 1845
Stove, parlor, design for.....	Samuel D. Vose.....	Albany, N. Y.....	July 25, 1846
Stove, parlor, design for	R. A. Gregory.....	New York, N. Y....	Oct. 3, 1846
Stove, parlor.....	Charles W. Leet.....	Vernon, N. Y.....	Feb. 10, 1846
Stove, parlor, cooking	R. D. Granger.....	Albany, N. Y.....	June 13, 1846
Stove, parlor, design for.....	Goodwin & Littlejohn.	New York, N. Y....	Dec. 10, 1846
Stoves, parlor and dumb, combined.....	Alonzo L. Blanchard..	Albany, N. Y.....	Nov. 12, 1811
Stoves, parlor grates and open fire places.....	Charles R. Wheeler..	Boston, Mass.....	July 18, 1840
Stoves, parlor or open grates for burning anthracite, &c.†	Otis Jenks	Albany, N. Y.....	Nov. 16, 1841
Stove-pipes.....	John Parkhurst, jr....	Cheshire, N. H....	Feb. 13, 1810
Stove-pipes.....	John Cudlip & George Price.....	Baltimore, Md.....	Nov. 18, 1818
Stove-pipes.....	William W. Weaver..	Philadelphia, Pa....	April 16, 1822
Stove-pipes.....	Caleb Jones.....	Burlington, Vt.....	April 5, 1823
Stove-pipes.....	Ezra Ripley.....	Albany, N. Y.....	Jan. 23, 1836
Stove-pipes.—See Class 2.			
Stove-pipes and drums.....	Merritt Bradford.....	Saugerties, N. Y....	Mar. 25, 1837
Stove-plate, design for	Johnson, Geer & Cox, assignees of E. Ripley	New York.....	Nov. 26, 1844
Stove-plate, design for	John M. French, assignee of Calvin Fulton.	Rochester, N. Y....	Nov. 1, 1845
Stove-plate, design for	Cresson, Sailor, and Stuart.....	Philadelphia, Pa....	Oct. 24, 1846
Stoves, portable**	C. L. H. Webb.....	Lockport, N. Y....	Dec. 6, 1845
Stoves, quadrant, hinge for	Ebenezer Barrows ..	Boston, Mass.....	Aug. 31, 1837
Stoves, radiators	Ethan A. Andrews ..	Boston, Mass.....	May 30, 1837
Stove, radiating	H. D. & J. McK. Fouse	Baltimore, Md.....	June 20, 1846
Stoves, rarifying air, &c.....	Daniel Pettibone	Roxbury, Conn....	Oct. 28, 1806
Stoves, regulating the draught in† ..	Elisha Foote, jr.....	Seneca Falls, N. Y.	May 26, 1842
Stoves, revolving ovens	J. H. & N. P. Hayward	Baltimore, Md.....	May 8, 1845
Stoves, rotary	Elisha Town.....	Montpelier, Vt.....	May 16, 1834
Stoves, rotary	Rensselaer D. Granger	Troy, N. Y.....	July 17, 1837
Stoves, rotary caps	Maynard French.....	Albany, N. Y.....	Mar. 2, 1836
Stoves, rotary top.....	Ira French, assignee of Maynard French ..	Cincinnati, Ohio....	June 11, 1842
Stoves, rotary top.....	Henry Stanley.....	West Poughkeepsie, Vt.	Oct. 25, 1845
Stoves, soapstone	William Payne.....	Dec. 10, 1797	
Stoves, spiral.....	Robert Roy.....	Warwick, N. Y....	Nov. 13, 1813
Stoves, steam, &c., portable	Thomas G. Feasenden	Charlestown, Mass..	Dec. 14, 1830
Stoves, stills, and boilers.....	John J. Giraud.....	Baltimore, Md.....	April 19, 1820
Stove, statue, design for	Alonzo L. Blanchard..	Albany, N. Y.....	July 25, 1846
Stoves, stone coal	George J. Fougeray..	Philadelphia, Pa....	Sept. 11, 1838
Stoves, stone coal	Philip Benedict.....	Lancaster, Pa.....	Feb. 27, 1830
Stoves, stone coal	Urbane B. A. Lange..	Philadelphia, Pa....	May 3, 1831
Stoves, stone coal	Philip Benedict.....	Lancaster, Pa.....	Oct. 27, 1835
Stoves, stone, fire-proof	Abraham H. Quincy ..	Boston, Mass.....	May 21, 1812

* Antedated April 1, 1845. † Antedated March 21, 1845. ‡ Antedated Sept. 9, 1845. § Antedated Nov. 11, 1840.
 ¶ Released Sept. 9, 1843. † Antedated Nov. 2, 1841. ** Antedated August 14, 1845. †† Disclaimer Mar. 8, 1847.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Stoves, transparent covers for....	Henry O. Billings....	Trenton, N. J.	Jan. 28, 1898
Stoves, ventilating.....	Daniel G. Quimby.....	Calais, Maine.....	Mar. 29, 1894
Stoves, ventilating.....	Clement Woodward..	Washington, D. C..	July 2, 1896
Temperature, instrument for regulating.....	David B. Van Tuyl..	Dayton, Ohio.....	Oct. 12, 1843
Tin kitchen.....	George Richardson...	South Reading, Mass.	June 14, 1832
Tinder box.....	Ira Ives.....	Farrington, Conn...	Oct. 25, 1816
Tubes for glass lamps.....	Deming Jarves.....	Cambridge, Mass...	Feb. 2, 1822
Tub, bathing.....	Jordan L. Mott.....	New York, N. Y....	Aug. 18, 1846
Ventilators and chimney caps...	Moses Chase.....	Boston, Mass.....	Mar. 7, 1846
Ventilator.....	Michael Collins.....	Boston, Mass.....	April 25, 1846
Ventilating and supplying houses with cold or hot air.	R. Mayo and Robert Mills.....	Washington, D. C..	Oct. 24, 1836
Victualler, economical.....	Benjamin C. Burdett..	New York.....	Aug. 4, 1827
Warm air, conveying to fire....	William R. Miller....	Hinsdale, N. Y....	Dec. 31, 1833
Warm air, for heating buildings, &c.	Joseph L. Dutton....	Philadelphia, Pa....	Mar. 13, 1834
Warming buildings, by radiated and steam heat, &c.....	Robert Rogers.....	South Berwick, Me.	June 12, 1835
Warming buildings, by converting hollow walls into flues.....	John A. Stewart.....	Philadelphia, Pa....	June 17, 1840
Warming buildings, apparatus for	Benjamin Blaney....	Boston, Mass.....	Sept. 7, 1844
Warming the interior of passenger cars, mode of.....	Tappen Townsend...	Albany, N. Y.....	July 24, 1846
Warming houses, &c.....	Robert Anlealy.....	Philadelphia, Pa....	April 27, 1814
Warming rooms.....	Barzillai Russell....	Hartford, Conn....	Mar. 4, 1811
Warming rooms.....	William Baker.....	Springfield, N. Y...	Sept. 9, 1825
Warming rooms.....	A. McAllester & John Iggett.....	Salem, N. Y.....	Dec. 15, 1827
Warming rooms, iron back log for	Charles Harris.....	Boston, Mass.....	May 15, 1815
Warming rooms, and management of heat.....	Robert B. Varden....	Baltimore, Md.....	Feb. 6, 1832
Warming rooms, by rarified air..	Daniel Pettibone....	Philadelphia, Pa....	May 12, 1812

CLASS No. VI.

STEAM AND GAS ENGINES,

Including Boilers and Furnaces therefor, and parts thereof.

LIST OF PATENTS.

CLASS VI.—STEAM AND GAS ENGINES, including Boilers and Furnaces therefor, and parts thereof.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Agricultural steam apparatus....	Edmund P. Bellinger.	Barnwell dist., S. C.	Nov. 19, 1833
Air condensing, apparatus for....	John Gregg.....	Rochester, N. Y....	Jan. 24, 1842
Atmospheric engines.....	E. & J. Prentiss	Baltimore, Md.....	June 22, 1824
Atmospheric engines.....	Edward A. Talbot....	Dublin, Ireland.....	June 21, 1828
Atmospheric engines.....	J. Mead & A. B. Kitchell	Lebanon, Ohio.....	July 27, 1829
Atmospheric engines, two cylinder	William Willis.....	Charleston, S. C....	Nov. 14, 1826
Blowers, steamboat.....	Isaac P. Smith.....	Orangetown, N. Y....	Mar. 11, 1846
Boilers, steam.....	J. Stevens, jr.....	Bergen co., N. J....	Aug. 26, 1791
Boilers, steam.....	Royal Yeaman.....	Baltimore, Md.....	Jan. 9, 1815
Boilers, steam.....	Lemuel M. Richards	Cazenovia, N. Y....	Mar. 30, 1815
Boilers, steam.....	Humphrey Ricketson.	New York.....	Dec. 13, 1816
Boilers, steam.....	Royal Yeaman.....	Baltimore, Md.....	Nov. 20, 1817
Boilers, steam.....	Stephen Baker.....	New York.....	Dec. 13, 1821
Boilers, steam.....	Eben. A. Lester.....	Boston, Mass.....	May 14, 1827
Boilers, steam.....	Lemuel M. Richards	Chagrin River, Ohio.	Aug. 21, 1828
Boilers, steam.....	Anthony Hermange..	Baltimore, Md.....	Nov. 26, 1828
Boilers, steam.....	Fra. Coffin and C. K. Beach.....	Boston, Mass.....	June 29, 1829
Boilers, steam.....	Henry M. Shreve....	Louisville, Ky.....	April 21, 1830
Boilers, steam.....	Peter Cooper.....	New York.....	Oct. 13, 1831
Boilers, steam.....	Isaiah Jennings.....	New York.....	Dec. 21, 1831
Boilers, steam.....	M. T. Wallace.....	New York.....	April 12, 1833
Boilers, steam.....	J. F. C. Salomon.....	Philadelphia, Pa....	Oct. 17, 1835
Boilers, steam.....	Thomas Ashcroft....	Boston, Mass.....	Nov. 23, 1835
Boilers, steam.....	J. W. & E. Strange..	Taunton, Mass.....	Sept. 29, 1836
Boilers, steam.....	James J. Rush.....	Philadelphia, Pa....	June 3, 1837
Boilers, steam.....	Jas. M. Whittemore..	Brighton, Mass.....	Nov. 23, 1837
Boilers, steam.....	Abram Van Order....	Ithaca, N. Y.....	July 17, 1838
Boilers, steam.....	Ellis L. Horton.....	Hartford, Ct.....	Sept. 5, 1838
Boilers, steam.....	Jacob Perkins, assigned to A. M. Perkins...	Now residing in Eng.	Dec. 15, 1838
Boilers, steam.....	Rd. Varick De Witt..	Albany, N. Y.....	Sept. 25, 1839
Boilers, steam.....	Jacob B. Eversole....	St. Louis, Mo.....	Mar. 31, 1840
Boilers, steam.....	Charles Clinton.....	Goshen, N. Y.....	April 29, 1842
Boilers, steam.....	Abram S. Valentine..	Bellefonte, Pa.....	April 6, 1842
Boilers, steam.....	James Montgomery..	Memphis, Tenn....	Dec. 26, 1845
Boilers, steam, applying a float to regulate the height of water in.	Cadwalader Evans ...	Pittsburg, Pa.....	Sept. 30, 1842
Boilers, steam, ascertaining the pressure of steam.....	George Bradley.....	Patterson, N. J.....	April 16, 1841
Boilers, steam, and boats.....	William Thornton...	Washington, D. C..	Jan. 16, 1809
Boilers, steam, caldron and furnace combined.....	Lansing E. Hopkins..	New York.....	Oct. 11, 1841
Boilers, steam, cast iron.....	John R. Averill.....	Manchester, N. Y....	May 27, 1824
Boilers, steam, combined furnace	Levi Disbrow.....	New York.....	Feb. 18, 1831
Boilers, steam, connecting of, and supplying water to the same...	Cadwalader Evans...	Pittsburg, Pa.....	Sept. 3, 1840
Boilers, steam, construction of...	Zenas C. Robbins....	St. Louis, Mo.....	July 28, 1843
Boilers, steam, effecting combustion in furnaces and flues of...	Christian E. Detmold.	New York.....	Dec. 4, 1843
Boilers, steam, engine.....	Nathan Read.....	Salem, Mass.....	Aug. 16, 1791
Boilers, steam, engine.....	Elijah Bachus.....	Virginia.....	May 31, 1796

* Reissued May 6, 1833.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCES.	WHEN ISSUED.
Boilers, steam, engine.....	Math. Longwell.....	Gettysburg, Pa.....	July 11, 1897
Boilers, steam, engine.....	William Shultz.....	New York.....	Jan. 26, 1816
Boilers, steam, engine.....	Edward Rumsey, ex'or of J. Rumsey.....	Kentucky.....	Nov. 15, 1816
Boilers, steam, engine.....	Samuel Morey.....	Oxford, N. H.....	Mar. 13, 1817
Boilers, steam, engine.....	John L. Sullivan.....	Boston, Mass.....	Feb. 26, 1818
Boilers, steam, engine.....	John L. Sullivan.....	Boston, Mass.....	Dec. 29, 1818
Boilers, steam, engine.....	Thomas Skidmore.....	New York.....	Nov. 30, 1821
Boilers, steam, engine.....	Ralph Bulkley.....	New York.....	Mar. 25, 1824
Boilers, steam, engine.....	John Poole.....	Sheffield, England..	May 14, 1827
Boilers, steam, engine.....	James P. Allaire.....	New York.....	May 14, 1828
Boilers, steam, engine.....	Alden Potter.....	New York.....	Oct. 11, 1828
Boilers, steam, engine.....	John C. Douglass.....	New York.....	Dec. 17, 1830
Boilers, steam, engine.....	Philo C. Curtis.....	Utica, N. Y.....	May 3, 1831
Boilers, steam, engine.....	Philo M. Hackley.....	Herkimer, N. Y.....	Dec. 27, 1831
Boilers, steam, engine.....	Russel Jarvis.....	Boston, Mass.....	Mar. 29, 1834
Boilers, steam, engine.....	Levi Burnell.....	Elyria, Ohio.....	May 21, 1834
Boilers, steam, and evaporating fluids.....	John Goulding.....	Dedham, Mass.....	Oct. 25, 1834
Boilers, steam, and evaporating fluids.....	John Goulding.....	Dedham, Mass.....	Oct. 25, 1834
Boilers, steam & evaporator, (im- provement in Marvin & Seely's)*	Oran W. Seely.....	New York.....	July 1, 1841
Boilers, steam, feeding.....	Hunsicker & Kraus ..	Northampton, Pa...	Aug. 30, 1835
Boilers, steam, flat.....	D. Fanshaw and H. Hawks.....	New York.....	June 11, 1839
Boilers, steam, furnaces of, increas- ing combustion by the decompo- sition of steam.....	Lucien Maillard.....	New York, N. Y....	May 18, 1839
Boilers, steam, and furnace for steam engines.....	Samuel Forbes.....	New York.....	Mar. 17, 1831
Boilers, steam, & furnace for boats	E. Nott.....	Schenectady, N. Y..	April 22, 1835
Boilers, steam, furnaces of, sup- plying steam to promote com- bustion.....	John B. Petitval.....	Charleston, S. C....	July 17, 1839
Boilers, steam, or generating appa- ratus.....	Gabriel H. Moreau...	France.....	Jan. 26, 1844
Boilers, steam, and generator	Lansing E. Hopkins...	New York, N. Y....	June 18, 1842
Boilers, steam, or generator.....	Austin W. Sharp and Wm. F. Horton...	Honeoye Falls, N. Y	Dec. 5, 1842
Boilers, steam gauge, steam safety	John A. Roebling...	Saxonburg, Pa.....	July 16, 1842
Boilers, steam heater of.....	Zenas C. Robbins.....	St. Louis, Mo.....	Oct. 16, 1844
Boilers, steam, improvement in...	E. Ingalls.....	Providence, R. I....	May 30, 1846
Boilers, steam, inverted arch.....	John C. F. Salomon..	Cincinnati, Ohio....	Nov. 16, 1839
Boilers, steam, of locomotive en- gines.....	John Penniman.....	Baltimore, Md.....	April 24, 1840
Boilers, steam, magnetic water- gauge.....	George Faber.....	Canton, Ohio.....	Nov. 26, 1845
Boilers, steam, measuring height of water in.....	Benjamin Phillips...	Philadelphia, Pa....	June 21, 1834
Boilers, steam pipes.....	John Goulding.....	Boston, Mass.....	June 19, 1835
Boilers, steam, purifying water...	Moody Park.....	Madison, Ia.....	Oct. 4, 1836
Boilers, steam, preventing explo- sion of.....	Philip C. Friese.....	Baltimore, Md.....	April 10, 1839
Boilers, steam, preventing explo- sion of.....	Cadwallader Evans...	Pittsburg, Pa.....	April 15, 1839
Boilers, steam, preventing explo- sion of.....	William H. Hale.....	Brooklyn, N. Y....	Sept. 14, 1839
Boilers, steam, preventing explo- sion of.....	Isaac N. Coffin.....	Washington, D. C..	Sept. 30, 1839
Boilers, steam, preventing explo- sion of.....	James Reid.....	Pawtucket, R. I....	May 19, 1840
Boilers, steam, preventing explo- sions.....	Cadwallader Evans ..	Pittsburg, Pa.....	Feb. 24, 1845

* See *Colosiëc*, Aug. 26, 1840.

† Reissued April 26, 1845.

INVENTORS OR DISCOVERERS.	PATENTERS.	RESIDENCE.	DATE ISSUED.
Boilers, steam, preventing explosions.....	William M. Wright..	Pittsburg, Pa.....	Feb. 24, 1845
Boilers, steam, preventing from bursting.....	John Shorb.....	Canton, Ohio.....	Feb. 20, 1846
Boilers, steam, regulating height of water in.....	Dummer H. Hooper..	New Albany, Ia....	Oct. 31, 1831
Boilers, steam, regulating height of water in*.....	Jesse Fox.....	Lowell, Mass.....	April 2, 1835
Boilers, steam, regulating height of water in.....	Thomas Odiorne.....	Malden, Mass.....	Sept. 26, 1835
Boilers, steam, regulating height of water in.....	Seth Graham.....	Roxbury, Mass....	Feb. 15, 1838
Boilers, steam, regulating the supply of water to.....	Daniel Barnum.....	Bridgeport, Ct.....	July 24, 1844
Boilers, steam, removing incrustation.....	L. A. Ritterbrandt...	Poland.....	Sept. 11, 1845
Boilers, steam, safety.....	Ralph Bulkley.....	New York.....	April 8, 1824
Boilers, steam, safety.....	John C. Douglass....	New York.....	July 20, 1831
Boilers, steam, safety.....	Charles Curus.....	New York.....	May 28, 1833
Boilers, steam, safety.....	Levin P. Clark.....	Baltimore, Md.....	May 30, 1838
Boilers, steam, safety valves of..	Wm. P. McConnell..	Washington, D. C..	May 19, 1843
Boilers, steam, safety valves of.....	William Duff.....	Baltimore, Md.....	July 28, 1843
Boilers, steam, safety apparatus..	James Montgomery..	Memphis, Tenn.....	Sept. 2, 1845
Boilers, steam, safety-valve.....	Abram Patterson....	Rush, Pa.....	Mar. 21, 1845
Boilers, steam, spiral flue for.....	Benjamin J. Miller...	New York city.....	April 5, 1838
Boilers, steam, stone coal for.....	James G. Wilson....	New York.....	Feb. 22, 1828
Boilers, steam, supplying with water.....	Benjamin M. Hyatt..	Wilmington, Del...	Oct. 10, 1840
Boilers, steam, supplying with water, apparatus for.....	Ethan Campbell.....	New York.....	Aug. 28, 1841
Boilers, steam, supplying with water, self-acting apparatus.....	John Hampson.....	New Orleans, La....	Sept. 4, 1841
Boilers, steam, supplying with water.....	John S. Williams....	Maysville, Ky.	Nov. 17, 1830
Boilers, steam, supplying with water.....	Jesse Fox.....	Lowell, Mass.....	Mar. 14, 1832
Boilers, steam, supplying with water.....	W. W. Van Loane...	New York.....	Dec. 31, 1834
Boilers, steam, triple pipe.....	Samuel Morey.....	Oxford, N. H.....	Dec. 19, 1818
Boilers, steam, tubular, generating steam.....	Charles W. Bentley..	Baltimore, Md.....	Sept. 1, 1843
Boilers, steam, vertical.....	Ezra L. Miller.....	Charleston, S. C....	June 21, 1830
Boilers, steam, and wheels for locomotives.....	S. H. Long.....	Philadelphia, Pa....	May 6, 1833
Carriage, steam.....	Charles Reynolds....	E. Windsor, Ct....	Aug. 21, 1811
Carriage, steam.....	Louis Bigelow.....	Petersham, Mass....	Aug. 29, 1823
Carriage, steam.....	Edward Clark.....	New York.....	Sept. 9, 1825
Combustion and explosion power	Aug. Day.....	Bordentown, N. J..	Jan. 19, 1811
Evaporator, compound.....	John A. Wadsworth..	Portsmouth, R. I..	Nov. 23, 1825
Evaporator, and steam engine....	David Heath.....	Philadelphia, Pa....	July 26, 1816
Explosion of boilers, preventing..	Thomas Ewbank.....	New York.....	June 8, 1830
Explosion of boilers, preventing..	Aaron B. Quimby....	Hagerstown, Md....	Oct. 1, 1830
Explosion of boilers, preventing..	Timothy Newhall, jr.	Lynn, Mass.....	April 12, 1834
Explosion of boilers, preventing..	Cadwalader Evans..	Philadelphia, Pa....	May 8, 1834
Explosion of boilers, preventing..	Augustus Eitelgeorge.	Cincinnati, Ohio....	May 22, 1837
Explosion of boilers, preventing..	William A. Turner...	Washington co., N.C	May 15, 1831
Explosion of boilers, preventing & burning.....	William A. Turner...	Washington co., N.C	April 6, 1831
Explosion of boilers, guard for...	J. Longhead and J. B. Chapman.....	Philadelphia, Pa....	June 11, 1830
Explosion, steamboats, mills, &c.	George R. Clarke....	Rochester, N. Y....	July 7, 1835
Explosion of boilers, preventing.....	Thomas S. Easton....	Mobile, Ala.....	Feb. 12, 1842
Explosion of boilers, preventing.....	Thomas S. Easton....	Mobile, Ala.....	May 17, 1842
Explosion of boilers, preventing.....	Thomas S. Easton....	Mobile, Ala.....	Nov. 9, 1842

* Reissued July 1st, or 21st, 1835.

† Date of foreign patent, Dec. 2, 1844.

‡ Add'l imp't, Jan. 30, 1844.

§ Additional improvement, May 17, 1842; reissued June 11, 1842.

¶ Reissued Oct. 7, 1843.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	DATE GRANTED.
Flat, rotary, spiral spring, for steam engines.....	Mason Young.....	Buffalo, N. Y.....	July 21, 1835
Furnaces for steam boilers.....	Gideon Shryock & S. Underwood.....	Louisville, Ky.....	Sept. 14, 1843
Furnace of steam boilers.....	Leman Bradley.....	Sharon, Ct.....	Dec. 12, 1844
Furnaces for steam boilers.....	Henry F. Baker.....	Boston, Mass.....	May 30, 1846
Gas burner.—See Class 5.			
Gas engines.....	Samuel Brown.....	London, Eng.....	Mar. 2, 1824
Gas engines.....	Maximin Isenard.....	New York.....	Dec. 11, 1824
Gas engines, or vapor.....	Samuel Morey.....	Oxford, N. H.....	April 1, 1826
Gas and heated air power.....	Minus Ward.....	Baltimore, Md.....	May 15, 1827
Gas engines.....	Stuart Perry.....	New York, N. Y.....	Oct. 7, 1846
Gas light apparatus.....	James Crutchett.....	Great Britain; now in Cincinnati, Ohio.....	May 6, 1844
Gas metres.....	John Hemming.....	North Bank, G. Brit.....	Nov. 4, 1842
Gas or vapor engine, inflammable.	Stuart Perry.....	Newport, N. Y.....	May 23, 1844
Gauge, sight for boilers.....	William Barker.....	Kingston, Pa.....	Mar. 24, 1825
Gauge, steam, for preventing the explosion of boilers.....	Samuel Raub, jr.....	Wilkesbarre, Pa.....	Dec. 28, 1835
Heat of blast furnaces to steam boilers, applying the waste steam	Martin Bell.....	Antis, Pa.....	June 10, 1840
Heat of blast furnace, as applied to steam engines.....	Edward Burrall.....	Canaan, Ct.....	Jan. 31, 1816
Heat, escape, application of.....	Alexander Brown.....	Salina, N. Y.....	Oct. 30, 1827
Heat, economy of, in generating steam.....	Tunis V. Le Roy.....	Newport, N. Y.....	Aug. 17, 1835
Heating water for steam boiler...	Ross Winans.....	Baltimore, Md.....	July 29, 1837
Locomotive power, engine for removing houses.....	Stephen Compton, jr.....	Almira, N. Y.....	July 21, 1837
Locomotive wheels, mode of removing.....	Thomas D. Simpson.....	Norwich, Ct.....	Sept. 30, 1835
Packing, for steam engines.....	William V. Grinnell.....	Middletown, Ct.....	April 5, 1832
Pistons, folding.....	David Hinman.....	Brunswick, Ohio.....	Mar. 7, 1846
Pistons, improvement in.....	James Richards.....	New York, N. Y.....	Oct. 3, 1846
Pistons, lubricating, of steam engines.....	Samuel Hall.....	Basford, Eng.....	Nov. 19, 1823
Pistons, lubricating, of steam engines.....	Samuel Hall.....	Basford, Eng.....	Oct. 30, 1834
Pistons, metallic, for steam engine pumps.....	John Swainson.....	New York.....	Mar. 30, 1837
Pistons, packing.....	John Williamson.....	New York.....	Aug. 31, 1837
Pistons, rotative.....	John M. Cooper.....	Guildhall, Vt.....	July 16, 1827
Pistons, steam engines for.....	Wright & Ketchum.....	Calhoun co., M. T.....	June 19, 1835
Pistons, steam engines for.....	Ellis L. Horton.....	Hartford Conn.....	Sept. 5, 1838
Pump, air, double, for steam engines.....	James Smallman.....	Philadelphia, Pa.....	Aug. 29, 1815
Pump, air, for steam engines.....	Thomas B. Stillman.....	New York.....	May 15, 1837
Pump, steam.....	G. W. Long.....	Old Point Comf., Va.....	Feb. 16, 1826
Pump, steam, boiler.....	Alfred Judson.....	Sweden, N. Y.....	Feb. 24, 1827
Pump, steam.....	P. Bernard and T. So-per.....	Witestown, N. Y.....	Jan. 16, 1811
Pump, steam, vacuum.....	Isaac Barnum.....	New York.....	April 16, 1834
Screw, swivel, for steam engines.	A. W. Hardenbrook.....	New York.....	Feb. 10, 1807
Snow plough.....	Daniel D. Stilwell.....	Philadelphia, Pa.....	Dec. 22, 1846
Snow plough, for railroads.....	J. A. Gregg.....	Derry, N. H.....	June 13, 1846
Spark arresters.....	Henry Wilton.....	Wrightsville, Pa.....	Aug. 17, 1839
Spark arresters.....	William Knight.....	Chambersburg, Pa.....	Oct. 26, 1839
Spark arresters.....	Leonard Phleger.....	Philadelphia, Pa.....	Nov. 25, 1839
Spark arresters.....	Nicholas Turbutt.....	Fredericktown, Md.....	Dec. 7, 1839
Spark arresters.....	Thos. Reaney & John Naglee; said Reaney having assig'd a moiety of his right to John Naglee.....	Philadelphia, Pa.....	Dec. 28, 1839

* English patent, dated July 12, 1822.

INVENTORS OR DISCOVERERS.	PATENTED.	REGISTERED.	DATE MADE.
Spark arresters*	Leonard Phleger.....	Philadelphia, Pa....	Sept. 16, 1840
Spark arresters	Randal Fish.....	New York.....	Oct. 14, 1840
Spark arresters	David Ritter.....	New Haven, Ct....	Nov. 26, 1840
Spark arresters	Wm. P. McConnell....	Washington, D. C..	Dec. 10, 1840
Spark arresters	David Matthew.....	Schenectady, N. Y..	Dec. 31, 1840
Spark arresters	Richard French.....	Philadelphia, Pa....	June 16, 1841
Spark arresters	L. Phleger, ass'nee of Wm. W. Hubbell..	Philadelphia, Pa....	June 26, 1841
Spark arresters.....	L. Phleger, ass'nee of Wm. W. Hubbell..	Philadelphia, Pa....	June 26, 1841
Spark arresters.....	L. Phleger, ass'nee of Wm. W. Hubbell..	Moyamensing, Pa....	June 26, 1841
Spark arresters.....	L. Phleger, ass'nee of Wm. W. Hubbell..	Philadelphia, Pa....	June 26, 1841
Spark arresters.....	L. Phleger, ass'nee of Wm. W. Hubbell..	Moyamensing, Pa....	June 26, 1841
Spark arresters.....	William C. Grimes....	York, Pa.....	Feb. 12, 1842
Spark arresters.....	Louis Chevrier.....	Brooklyn, N. Y....	Feb. 21, 1842
Spark arresters.....	James Lewis.....	Saratoga Sp'gs, N. Y.	Feb. 21, 1842
Spark arresters.....	John C. Johnson.....	Catskill, N. Y.....	Feb. 28, 1842
Spark arresters.....	John V. L. Hoegland..	Jersey City, N. J....	Mar. 26, 1842
Spark arresters.....	Abraham Keagy & M. Shimer.....	Woodbury, Pa.....	April 29, 1842
Spark arresters.....	Jonathan Hodges.....	Taunton, Mass.....	June 22, 1842
Spark arresters.....	Samuel G. Brown.....	Henrietta, N. Y....	Sept. 23, 1842
Spark arresters.....	James Eckler.....	Catskill, N. Y.....	Oct. 7, 1842
Spark arresters, extinguishing and consuming.....	Abraham Ayres.....	Hicksville, N. Y....	Feb. 28, 1843
Spark arresters.....	Zibeon Wilbar.....	Allegany town'p, Pa.	Jan. 10, 1843
Spark arresters.....	James A. Roebling....	Saxtonburg, Pa....	Feb. 16, 1843
Spark arresters.....	Samuel Swett, jr.....	New York.....	May 13, 1843
Spark arresters.....	William C. Grimes....	Philadelphia, Pa....	June 7, 1843
Spark arresters.....	William C. Grimes....	Baltimore, Md.....	May 13, 1843
Spark arresters.....	William C. Grimes....	Baltimore, Md.....	Sept. 23, 1843
Spark arresters.....	William Duff.....	Baltimore, Md.....	Sept. 30, 1843
Spark arresters.....	Samuel Swett, jr.....	Boston Mass.....	Aug. 26, 1844
Spark arresters.....	Aug. Hamann.....	Washington, D. C..	Sept. 10, 1844
Spark catcher.....	Alfred C. Jones.....	Portsmouth, Va....	Aug. 27, 1835
Spark catcher.....	Haut C. Wiat.....	Weldon, N. C.....	Oct. 15, 1835
Spark catcher.....	George Holbrook....	Boston, Mass.....	Nov. 23, 1835
Spark catcher.....	James W. Waples....	Wilmington, Del....	Nov. 30, 1835
Spark catcher.....	A. McDonough.....	Philadelphia, Pa....	Feb. 17, 1836
Spark catcher.....	Francis Milo.....	New York city.....	Feb. 26, 1836
Spark catcher.....	William Shultz.....	Philadelphia, Pa....	Mar. 31, 1836
Spark catcher.....	Janus F. Curtis.....	Boston, Mass.....	April 13, 1836
Spark catcher.....	A. Whitney and L. L. Burr.....	Albany, N. Y.....	May 23, 1836
Spark catcher.....	Gabriel Winter.....	Donaldsonville, Pa..	July 1, 1836
Spark catcher.....	Timothy Newhall....	Lynn, Mass.....	Jan. 24, 1836
Spark catcher.....	Jonas P. Fairlamb....	Philadelphia, Pa....	Mar. 3, 1836
Spark catcher.....	William T. James....	New York city.....	April 13, 1836
Spark catcher.....	T. L. Smith and W. J. Van Loane.....	Newark, N. J.....	June 20, 1836
Spark catcher.....	Wm. S. Montgomery..	Baltimore, Md.....	July 26, 1836
Spark catcher.....	Benjamin Briacoe....	Detroit, Mich.....	Dec. 15, 1836
Spark catcher.....	Samuel Leonard.....	Bridgewater, Mass..	Dec. 15, 1836
Spark catcher.....	John Finlay.....	Baltimore, Md.....	Dec. 28, 1836
Spark catcher, &c.....	William Duff.....	Baltimore, Md.....	Dec. 30, 1837
Spark catcher, centrifugal, &c.....	James Stimpson.....	Baltimore, Md.....	April 17, 1837
Spark catcher, flue	Johannes Oberhauser	Charleston, S. C....	Feb. 24, 1837
Steam, applying	Samuel Morey.....	Oxford, N. H.....	Mar. 25, 1795
Steam, applying	Samuel Briggs.....	New Orleans, La....	May 26, 1817
Steam, applying	Aaron N. Sabin.....	Frankfort, Ky.....	Dec. 30, 1820
Steam, applying	Michael Musselman..	Phelps, N. Y.....	Dec. 29, 1825
Steam, applying	Joseph Skinner.....	Mantua, Ohio.....	Mar. 14, 1826

* Reissued Dec. 26, 1840. † Antedated Mar. 1, 1845. ‡ Antedated Jan. 1, 1845. § Added imp., June 14, 1838

INVENTIONS OR DISCOVERIES.	PATENTERS.	PLACES.	WHEN GRANTED.
Steam, applying.....	E. Packard and J. E. Strong.....	Granville, N. Y....	Aug. 7, 1829
Steam, applying.....	Ethan Baldwin.....	Washington, D. C..	Jan. 28, 1833
Steam, applying.....	John Lockwood.....	Sodus, N. Y.....	Dec. 28, 1833
Steam, applying, to blast furnaces,	Cotton Foss.....	Madison, Ohio.....	Aug. 2, 1836
Steam, applying, constant motion			
for.....	Marcus B. Parmelee..	Newtown, Conn....	Aug. 25, 1812
Steam, applying, to water.....	Samuel Morey.....	Oxford, N. H.....	Mar. 27, 1799
Steam, applying, to water.....	Samuel Morey.....	Oxford, N. H.....	Nov. 17, 1800
Steam, applying, to machinery, &c	Seth Boyden.....	Newark, N. J.....	Oct. 31, 1832
Steam, condensing apparatus for ..	Asahel Collins.....	Ulster, N. Y.....	Dec. 31, 1836
Steam, and condensed air, applying	Elizabeth Spafford, ad-		
	ministratrix of H. G.		
	Spafford.....	Lansingburg, N. Y.	July 2, 1833
Steam engine.....	James Rumsey.....	Berkley county, Va.	Aug. 26, 1791
Steam engine.....	Englehart Cruse.....	Baltimore, Md.....	Aug. 26, 1791
Steam engine.....	John Stevens, jr.....	Bergen county, N. J.	Aug. 26, 1791
Steam engine.....	Samuel Briggs.....	Georgia.....	Oct. 9, 1802
Steam engine.....	John Stevens.....	New York.....	April 11, 1803
Steam engine.....	S. Morey, R. Graves,		
	and G. Richards.....	Massachusetts.....	June 15, 1803
Steam engine*.....	Oliver Evans.....	Philadelphia, Pa....	Feb. 14, 1804
Steam engine.....	J. Stubbs & N. Parsons	Chilliotheo, Ohio....	Feb. 25, 1811
Steam engine.....	Daniel Dodd.....	New York.....	Nov. 29, 1811
Steam engine.....	J. Curtis and Royal	Plymouth, N. Y. and	
	Yeaman.....	Westfield, Mass....	Feb. 8, 1812
Steam engine.....	Daniel Dodd.....	Elizabethtown, N. J.	May 12, 1812
Steam engine.....	Alexander Anderson...	Philadelphia, Pa....	Aug. 21, 1812
Steam engine.....	James D. Russell.....	Washington, N. C....	April 10, 1813
Steam engine.....	S. Briggs and A. Steele	Baton Rouge, La....	May 29, 1813
Steam engine.....	Charles Reynolds.....	East Windsor, Pa....	July 23, 1814
Steam engine.....	Borden Welbor.....	Whitestown, N. Y....	April 26, 1815
Steam engine.....	Samuel Morey.....	Boston, Mass.....	July 14, 1815
Steam engine.....	Junia Curtis.....	Baltimore, Md.....	Aug. 8, 1815
Steam engine.....	Matthew Cluff.....	Norfolk, Va.....	Sept. 1, 1815
Steam engine.....	John Stevens.....	Hoboken, N. J.....	Mar. 14, 1816
Steam engine.....	Enoch Burt.....	Elizabethtown, N. J.	May 12, 1816
Steam engine.....	Joseph Hawkins.....	New York.....	June 14, 1816
Steam engine.....	Enoch Burt.....	Elizabethtown, N. J.	June 25, 1816
Steam engine.....	John Hilton.....	Somerset, Maine.....	Aug. 22, 1816
Steam engine.....	Samuel Fairlamb.....	Marietta, Ohio.....	Oct. 24, 1816
Steam engine.....	John L. Sullivan.....	Boston, Mass.....	Mar. 24, 1817
Steam engine.....	John Heavin.....	Virginia.....	Aug. 27, 1817
Steam engine.....	I. J. Richardson.....	Geneva, N. Y.....	Oct. 13, 1817
Steam engine.....	B. Hendryx & H. Price	Springfield, N. Y....	April 13, 1818
Steam engine.....	Joseph Eve.....	Augusta, Ga.....	May 28, 1818
Steam engine.....	William Church.....	Baltimore, Md.....	July 11, 1818
Steam engine.....	Robert Thomas.....	Richmond co., N. C....	May 29, 1819
Steam engine.....	Charles Leake.....	Ross county, Ohio....	Jan. 22, 1820
Steam engine.....	Minus Ward.....	Columbia, S. C.....	Mar. 23, 1821
Steam engine.....	Thomas Hatton.....	Philadelphia, Pa....	Feb. 28, 1822
Steam engine.....	Amos Thayer, jr.....	New York.....	Mar. 6, 1823
Steam engine.....	H. Betts and J. A. Mc-		
	Lean.....	Norwalk, Conn.....	Dec. 24, 1823
Steam engine.....	Jos. Dixon, jr.....	Philadelphia, Pa....	April 13, 1824
Steam engine.....	Ralph Bulkley.....	New York.....	April 30, 1824
Steam engine.....	Henry Lainhart, jr.....	New Orleans, La....	May 6, 1824
Steam engine.....	D. B. Lee.....	Philadelphia, Pa....	June 9, 1824
Steam engine.....	Jos. Buchanan.....	Lexington, Ky.....	Sept. 13, 1824
Steam engine.....	Stephen T. Conn.....	Washington, D. C....	Sept. 29, 1824
Steam engine.....	I. Jennings.....	New York.....	Mar. 15, 1825
Steam engine.....	H. Avery & H. Scoville	Pompey, N. Y.....	Sept. 30, 1825
Steam engine.....	Mahlon Betts.....	Wilmington, Del....	Nov. 26, 1825
Steam engine.....	Stephen T. Conn.....	New York.....	Nov. 29, 1825

* Renewed by Congress, Feb. 7, 1815.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN GRANTED.
Steam engine.....	George Deming.....	Niagara, N. Y.....	Mar. 10, 1828
Steam engine.....	John McCurdy.....	London, England....	July 1, 1826
Steam engine.....	Joseph Eve.....	London, England....	Aug. 16, 1826
Steam engine.....	Elisha Bigelow.....	Baltimore, Md.....	Nov. 6, 1826
Steam engine.....	E. A. Lester.....	Boston, Mass.....	May 14, 1827
Steam engine.....	John Maynard.....	Ovid, N. Y.....	June 15, 1827
Steam engine.....	Warren P. Wing.....	Greenwich Vil. Mass	Aug. 17, 1827
Steam engine.....	Sim. Broadmeadow.....	New York.....	Jan. 29, 1828
Steam engine.....	A. S. Kirk.....	Smithfield town'p, O.	Feb. 13, 1828
Steam engine.....	Mellen Battle.....	Albany, N. Y.....	Nov. 6, 1829
Steam engine.....	Benjamin Reeves.....	Philadelphia, Pa.....	Feb. 6, 1830
Steam engine.....	Charles Potts.....	Philadelphia, Pa.....	May 31, 1830
Steam engine.....	Franklin G. Smith.....	Lynchburg, Va.....	Oct. 12, 1830
Steam engine.....	Hugh Gordon.....	New York.....	Feb. 28, 1831
Steam engine.....	I. S. Richardson.....	New Market, N. H.	Oct. 17, 1831
Steam engine.....	Stacy Costill.....	Philadelphia, Pa.....	Feb. 20, 1832
Steam engine.....	La Fayette Tibbits.....	New Glasgow, Va.....	June 22, 1832
Steam engine.....	John B. Emerson.....	New York.....	Mar. 8, 1834
Steam engine.....	Samuel Hall.....	Basford, England....	Oct. 30, 1834
Steam engine.....	John Murphy.....	Philadelphia, Pa.....	Mar. 24, 1835
Steam engine.....	Job Sheldon.....	New Haven, Conn.....	Mar. 24, 1835
Steam engine.....	John Bennack.....	Orono, Maine.....	Sept. 9, 1835
Steam engine.....	A. S. Dawley.....	Boston, Mass.....	May 23, 1836
Steam engine.....	Seth Graham.....	Roxbury, Mass.....	April 21, 1836
Steam engine.....	Nathaniel Bosworth.....	Philadelphia, Pa.....	July 9, 1836
Steam engine.....	William A. Lighthall.....	Albany, N. Y.....	April 14, 1836
Steam engine.....	William Whitham.....	Huddersfield, Eng.....	Sept. 4, 1841
Steam engine.....	Ralph Pomeroy.....	Bellville, N. J.....	Jan. 24, 1842
Steam engine.....	William Kelly.....	Pittsburg, Pa.....	June 18, 1842
Steam engine.....	Alexander Connison.....	Newark, N. J.....	Dec. 5, 1842
Steam engine.....	R. F. Loper.....	Philadelphia, Pa.....	Nov. 26, 1845
Steam engine.....	John Ericsson.....	New York.....	Dec. 20, 1845
Steam engine.....	H. Olney, J. H. Whelp- ley, & D. G. Raven.....	Gouverneur, N. Y.....	June 20, 1846
Steam engine.....	Nathan N. Barlow.....	Homer, N. Y.....	Oct. 2, 1846
Steam engine, air pump used in low-pressure.....	Charles Reeder.....	Baltimore, Md.....	Nov. 15, 1843
Steam engine, arrangement of the valves, &c.....	Daniel Barnum.....	New York, N. Y.....	Sept. 19, 1846
Steam engine, arranging cylinders in double cylinder engines, for preventing dead point in crank	Caleb L. Ferris.....	Courtland, N. Y.....	July 1, 1840
Steam engine, &c., apparatus to be substituted for the piston cylin- der of.....	Abram Patterson.....	Rush, Pa.....	Feb. 26, 1839
Steam engine, application of steam	Francis B. Ogden.....	Essex, N. J.....	Dec. 13, 1813
Steam engine, anti steam power..	William Willis.....	Charleston, S. C.....	Feb. 1, 1836
Steam engine, auxiliary.....	John Cochrane.....	Baltimore, Md.....	April 16, 1845
Steam engine, auxiliary, construct- ing and governing, for the pur- pose of supplying a steam boiler with water†.....	Henry R. Worthington.....	New York.....	July 24, 1844
Steam engine, boats, mills, &c...	Daniel French.....	New York.....	Oct. 12, 1809
Steam engine, boats and vessels...	Robert Fulton.....	New York.....	Feb. 9, 1811
Steam engine, boats.....	John Stephens.....	New York.....	May 21, 1811
Steam engine, and boiler.....	John Stephens.....	New York.....	Jan. 3, 1810
Steam engine and other boilers, supplying air to consume the combustible gases, &c., that es- cape from the furnaces.....	Peter Robinson.....	Waterloo, N. Y.....	April 20, 1844
Steam engine, centrifugal, pneu- matic.....	Charles C. Conway.....	New York.....	Nov. 14, 1835
Steam engine, changing, reciproc- ating into rotary motion.....	Alexander M. Bouton and Andrew Perry.....	Newark, N. J.....	Aug. 18, 1842

* Returned July 18, 1846.

† Reissued Sept. 7, 1844.

INVENTIONS OR DISCOVERIES.	PATENTEE.	INVENTOR.	DATE GRANTED.
Steam engine, circulating.....	Timothy Beach.....	Deer Creek, Ohio...	Nov. 16, 1835
Steam engines, condensers of and apparatus for supplying the boilers with water.....	Josephus Echols.....	Columbus, Ga.....	Aug. 11, 1841
Steam engine, condenser of.....	Henry K. Stephens.....	Cincinnati, Ohio....	Dec. 4, 1843
Steam engine, condenser for.....	Joseph P. Pirsson....	New York, N. Y....	Feb. 10, 1846
Steam engines, condenser for.....	Thomas Skidmore.....	New York.....	Dec. 1, 1831
Steam engine, condenser for.....	Benjamin F. Joslin....	New York.....	Feb. 9, 1835
Steam engine, condensing.....	B. F. Joslin.....	Schenectady, N. Y..	Dec. 16, 1834
Steam engine, condenser and boilers of.....	Benjamin Crawford..	Allegheny city, Pa..	Sept. 7, 1844
Steam engine, condensing apparatus of.....	Daniel Treadwell....	Cambridge, Mass....	Mar. 31, 1840
Steam engine, conducting the steam from the cylinder.....	George and George W. Davis.....	Canal Fulton, Ohio..	May 4, 1842
Steam engine, conical balance valves.....	Thomas McDonough..	Middletown, Conn..	Feb. 12, 1844
Steam engine, conical seat, steam valves.....	Sprague Barber.....	New York.....	April 20, 1844
Steam engine, connecting cylinder and chest.....	Frederick E. Sickles..	New York.....	Sept. 19, 1845
Steam engine, connecting cranks of.....	Frederick E. Sickles..	New York.....	Sept. 19, 1845
Steam engine, cutting off steam from.....	Isaac Adams.....	Boston, Mass.....	May 17, 1836
Steam engine cut off valves.....	Frederick E. Sickles..	New York.....	Sept. 19, 1845
Steam engine cut off valves.....	John Cochrane.....	Baltimore, Md.....	April 16, 1845
Steam engine cut off valves.....	Thomas Rogers.....	Patterson, N. J.....	May 1, 1845
Steam engine, dead point, avoiding.....	Valentine Carter.....	Georgetown, D. C..	Aug. 3, 1839
Steam engine, discharging water and air from the condenser of.....	Robert G. Eunson....	New York.....	Sept. 23, 1842
Steam engine, double.....	J. Smallman and N. J. Roosevelt.....	.....	May 31, 1798
Steam engine, draft, box for.....	Andrew M. Eastwick..	Philadelphia, Pa....	April 5, 1838
Steam engine, evaporator.....	David Heath.....	Philadelphia, Pa....	July 26, 1816
Steam engine, expansive.....	Sprague Barber.....	Providence, R. I....	June 14, 1834
Steam engine, feeder for boiler.....	Ogden Mallory.....	Oswego, N. Y.....	Dec. 28, 1836
Steam engine, &c., governor or regulator of.....	Louis Lize.....	Kingdom of France, (residing in Pittsburgh, Pa.).....	Nov. 25, 1841
Steam engine, high-pressure, mode of heating the supply water and carrying off the escape steam...	Nathan Cope.....	Hanover, Ohio.....	Feb. 20, 1843
Steam engine, high-pressure, safety.....	Isaiah Jennings.....	New York.....	Feb. 11, 1838
Steam engine, high temperature..	John Babcock.....	Portsmouth, R. I....	May 1, 1834
Steam engine, horizontal.....	Jacob W. Sexton....	Burlington, N. J....	July 18, 1812
Steam engine, horizontal.....	Charles Curtis.....	New York.....	May 22, 1833
Steam engine, horizontal, pistons and slide valves for.....	Benjamin H. Brown..	Philadelphia, Pa....	Sept. 1, 1842
Steam engine, hydraulic.....	John Catlin.....	Cincinnati, Ohio....	June 1, 1829
Steam engine, hydraulic.—See Class 9.	Charles Collins, ass'tee of James Pilbrow.	Kidderminster, Eng. Tottingham Green, England.....	June 14, 1843
Steam engine, locomotive.....	William Howard.....	Baltimore, Md.....	Dec. 10, 1836
Steam engine, locomotive.....	S. H. Long.....	Philadelphia, Pa....	Jan. 17, 1833
Steam engine, locomotive.....	Chas. & Geo. E. Sellers	Philadelphia, Pa....	May 22, 1836
Steam engine, locomotive.....	H. R. Campbell.....	N. L. Philadelphia, Pa	Feb. 5, 1836
Steam engine, locomotive.....	Francis Barker.....	Baltimore, Md.....	Sept. 1836
Steam engine, locomotive.....	Ross Winans.....	Baltimore, Md.....	July 29, 1837
Steam engine, locomotive.....	Ross Winans.....	Baltimore, Md.....	July 29, 1837
Steam engine, locomotive.....	Samuel Wright.....	Philadelphia, Pa....	Dec. 26, 1837
Steam engine, locomotive.....	Z. H. Mann and Levi B. Thying.....	Lowell, Mass.....	Mar. 10, 1836
Steam engine, locomotive.....	Asa Whitney.....	Rottardam, N. Y....	June 27, 1840
Steam engine, locomotive.....	Matthias W. Baldwin	Philadelphia, Pa....	Dec. 31, 1840

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	DATE GRANTED.
Steam engine, locomotive.....	Ross Winans.....	Baltimore, Md.....	July 29, 1837
Steam engine, locomotive.....	Edwin F. Johnson...	New York.....	Dec. 31, 1838
Steam engine, locomotive.....	Matthias W. Baldwin	Philadelphia, Pa....	May 16, 1843
Steam engine, locomotive, ascend- ing inclined planes.	Davis H. Dotterer and Thomas Jackson...	Reading, Pa.....	Mar. 25, 1839
Steam engine, locomotive, blowing fire	Ross Winans.....	Baltimore, Md.....	July 29, 1837
Steam engine, locomotive, and cars	S. H. Long.....	Philadelphia, Pa....	Dec. 23, 1832
Steam engine, locomotive, and cars	Alfred C. Jones.....	Philadelphia, Pa....	June 14, 1834
Steam engine, locomotive, and cars	M. W. Baldwin.....	Philadelphia, Pa....	Sept. 10, 1834
Steam engine, locomotive, connect- ing the driving wheels of.....	Robert L. Stevens...	New York, N. Y....	Sept. 3, 1842
Steam engine, locomotive, con- structing, by which they adapt themselves to the curves and un- dululations of the road.....	Matthias W. Baldwin	Philadelphia, Pa....	Aug. 25, 1842
Steam engine, locomotive, consum- ing sparks.	Francis B. Longmire and H. Jones Brooke	Philadelphia, Pa....	July 10, 1840
Steam engine, locomotive, distri- buting sand, &c., to produce ad- hesion of driving wheels.....	Elisha Tolles.....	New York.....	Oct. 9, 1841
Steam engine, locomotive, force pump and wheels.....	S. H. Long.....	Philadelphia, Pa....	Dec. 31, 1833
Steam engine, locomotive, framing	Ross Winans.....	Baltimore, Md.....	July 29, 1837
Steam engine, locomotive, govern- ing and reversing.....	Jacob D. Custer.....	Morristown, Pa....	June 21, 1844
Steam engine, locomotive, for in- clined planes.....	Sands Olcott.....	Harsimus, N. J....	Sept. 11, 1829
Steam engine, locomotive, for in- clined planes*.....	John Ruggles.....	Thomaston, Maine.	July 28, 1835
Steam engine, locomotive, increas- ing adhesion of driving wheel of	Jordon L. Mott.....	New York.....	Aug. 28, 1842
Steam engine, locomotive, propel- ling by stationary power.....	John A. Etzler.....	Philadelphia, Pa....	Dec. 23, 1841
Steam engine, locomotive, and rail- roads	Isaac W. Edgar.....	Wayne county, Ohio	July 2, 1836
Steam engine, locomotive, for rail- roads	Henry Waterman...	Hudson, N. Y....	Feb. 10, 1841
Steam engine, locomotive, for rail- road carriages.....	Alfred C. Jones.....	Philadelphia, Pa....	Oct. 10, 1840
Steam engine, locomotive, regulat- ing waste steam.....	Ross Winans.....	Baltimore, Md.....	Nov. 26, 1840
Steam engine, locomotive, saw-mil-	—See <i>Saw Mill, Class</i> 14.		
Steam engine, locomotive, six and eight wheeled.....	Ross Winans.....	Baltimore, Md.....	July 29, 1837
Steam engine, locomotive, supply- ing water to.	Stephen Vail.....	Speedwell Iron Wks., Morristown, N. J.	July 12, 1839
Steam engine, locomotive, wheels, and boiler, tubes for.....	M. W. Baldwin.....	Philadelphia, Pa....	April 3, 1835
Steam engine, locomotive, wheels, and boiler, tubes for.....	M. W. Baldwin.....	Philadelphia, Pa....	Aug. 17, 1835
Steam engine, low pressure.....	Charles W. Copeland.	New York.....	June 11, 1841
Steam engine, machinery.....	William A. Turner...	Washington co. N.C.	July 21, 1832
Steam engine, making dry steam..	John Goulding.....	Dedham, Mass.....	Oct. 25, 1834
Steam engine, marine.....	William A. Lighthall.	Albany, N. Y....	April 11, 1832
Steam engine, marine†.....	Joseph Mandalay and Joshua Field.....	Lambeth, England..	June 11, 1842
Steam engine, mode of confining the steam to produce rotary mo- tion.....	Richard F. Stephens..	St. Louis, Missouri.	May 30, 1846
Steam engine, mode of construct- ing locomotives.....	Ross Winans.....	Baltimore, Md.....	Oct. 14, 1846
Steam engine, mode of operating.	Zachariah Allen.....	Providence, R. I....	Mar. 28, 1834
Steam engine, nautical.....	Edward Rumsey.....	Kentucky.....	Nov. 15, 1818

* Antedated July 13, 1836.

† Date of English patent, May 7 1839.

INVENTORS OR DISCOVERERS.	PATENTERS.	PLACES.	DATE.
Steam engine, opening and closing the valves of.....	Frederick E. Sickles..	New York.....	Oct. 19, 1844
Steam engines, packing for pistons, &c.....	Charles F. Pike.....	Providence, P. I....	Aug. 12, 1840
Steam engine, pendulum.....	John Staples.....	Richmond, Va.....	July 18, 1811
Steam engine, &c., piston rods of	John R. St. John....	Cleveland, O.....	April 27, 1841
Steam engine, pistons of steam cylinders, constructing, &c.,...	Matthias W. Baldwin	Philadelphia, Pa....	Dec. 17, 1840
Steam engine, pistons and stuffing box of	Elijah H. & Cyrus Eversole	St. Louis, Mo.....	July 20, 1843
Steam engine, reacting.....	Ambrose Foster and Wm. Avery.....	Salina, N. Y.....	Sept. 28, 1831
Steam engine, reacting, &c.....	Louis Brunier.....	France.....	Oct. 25, 1842
Steam engine, reacting rotary...	James Black.....	Williamsport, Pa....	Mar. 12, 1845
Steam engine, regulating the pressure of steam.....	Francis R. Torbet...	Patterson, N. J.....	Mar. 29, 1841
Steam engine, repeating expansive engine.....	James Frost.....	New York.....	Nov. 3, 1841
Steam engine, rotary.....	Mellen Battle.....	Herkimer, N. Y....	Mar. 27, 1812
Steam engine, rotary.....	Isaiah Jennings....	New York.....	Jan. 17, 1817
Steam engine, rotary.....	Nathan Read.....	Boston, Mass.....	Feb. 21, 1817
Steam engine, rotary.....	John L. Sullivan....	Boston, Mass.....	Dec. 10, 1818
Steam engine, rotary.....	Antoine Batby.....	New York.....	May 26, 1819
Steam engine, rotary.....	J. Lansing & A. Thayer, jr.....	Albany, N. Y.....	Jan. 19, 1822
Steam engine, rotary.....	Dudley L. Farnham..	Albany, N. Y.....	Feb. 19, 1823
Steam engine, rotary.....	James Thompson....	Pittsburg, Pa.....	July 16, 1823
Steam engine, rotary.....	R. N. Powers.....	Cincinnati, Ohio....	April 29, 1824
Steam engine, rotary.....	Anthony Cooley.....	Le Roy, N. Y.....	July 29, 1824
Steam engine, rotary.....	John Gilbert.....	Le Roy, N. Y.....	Nov. 17, 1824
Steam engine, rotary.....	Elisha Hall.....	Pomfret, N. Y.....	May 20, 1825
Steam engine, rotary.....	John A. Wadsworth..	Portsmouth, R. I....	Sept. 27, 1825
Steam engine, rotary.....	Robert Dennis.....	Rahway, N. J.....	Nov. 3, 1825
Steam engine, rotary.....	J. R. Averill and F. Hoard.....	Rochester, N. Y....	Nov. 12, 1825
Steam engine, rotary.....	S. Fairlamb and E. Bruce, jr.....	New York.....	May 25, 1826
Steam engine, rotary.....	Elijah H. Reed.....	Lancaster, Ky.....	Nov. 10, 1826
Steam engine, rotary.....	Francis Harris.....	Albany, N. Y.....	July 10, 1827
Steam engine, rotary.....	Stillman Blake.....	Providence, R. I....	Oct. 11, 1828
Steam engine, rotary.....	D. B. Lee & S. Stewart	Philadelphia, Pa....	June 11, 1829
Steam engine, rotary.....	Joseph Mount.....	Naashville, Ten....	July 16, 1829
Steam engine, rotary.....	J. G. Ketchkiss.....	Cincinnati, Ohio....	Oct. 1, 1830
Steam engine, rotary.....	Ezra Child.....	Philadelphia, Pa....	Oct. 1, 1830
Steam engine, rotary.....	Thomas Powell.....	Baltimore, Md.....	Oct. 1, 1830
Steam engine, rotary.....	Abel Greenleaf.....	Paris, N. Y.....	April 18, 1831
Steam engine, rotary.....	Ebenezer R. Yale....	Hyde Park, N. Y....	June 13, 1831
Steam engine, rotary.....	J. Catlin & C. Fletcher	Cincinnati, Ohio....	June 13, 1831
Steam engine, rotary.....	Luther Carman.....	Oxford, Maine.....	July 16, 1832
Steam engine, rotary.....	William Jones.....	Bradford, Va.....	Nov. 10, 1832
Steam engine, rotary.....	Charles R. Alsop....	Middletown, Con...	Jan. 21, 1833
Steam engine, rotary.....	A. Pott & B. F. Pomeroy.....	Pottsville, Pa.....	Mar. 11, 1833
Steam engine, rotary.....	E. Penny and I. N. Crosby.....	Rochester, N. Y....	July 22, 1833
Steam engine, rotary.....	William Sutton.....	Geneva, N. Y.....	Sept. 18, 1834
Steam engine, rotary.....	George M. Allsop....	Philadelphia, Pa....	Feb. 20, 1835
Steam engine, rotary.....	Orson Barnes.....	Van Buren, N. Y....	June 26, 1835
Steam engine, rotary.....	Arnold Buffum.....	Philadelphia, Pa....	Oct. 10, 1835
Steam engine, rotary.....	Aaron Clarke.....	Bangor, Maine.....	Feb. 16, 1836
Steam engine, rotary.....	David Ulan.....	Greenburg, Pa.....	Mar. 23, 1836
Steam engine, rotary.....	Shepherd Whitman..	New Albany, Ind....	June 25, 1836
Steam engine, rotary.....	F. Carpenter.....	Cazenovia, N. Y....	July 2, 1836
Steam engine, rotary.....	Roger M. Sherman..	Fairfield, Ct.....	April 25, 1837

IMPROVEMENTS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	DATE GRANTED.
Steam engine, rotary.....	D. Grannis and D. E. Brand.....	Collins, N. Y.....	July 29, 1837
Steam engine, rotary.....	A. Miller.....	Lockport, N. Y.....	Aug. 8, 1837
Steam engine, rotary.....	O. Wright and A. A. Wilder.....	Warsaw, N. Y.....	April 2, 1838
Steam engine, rotary.....	Joseph Woodhull.....	Rochester, N. Y.....	April 6, 1829
Steam engine, rotary.....	Roger M. Sherman.....	Fairfield, Ct.....	Mar. 12, 1839
Steam engine, rotary.....	John Drummond.....	Elizabethtown, N. J.....	Aug. 3, 1839
Steam engine, rotary.....	William H. Baker and Samuel H. Baldwin.....	Cohoes, N. Y.....	Aug. 21, 1839
Steam engine, rotary.....	Jacob C. Robie.....	Binghamton, N. Y.....	Nov. 26, 1840
Steam engine, rotary.....	Jesse Tuttle.....	Boston, Mass.....	Mar. 26, 1841
Steam engine, rotary.....	Jas. Jamieson Cordes, Edward Locke.....	Citizen of the U. S. [*] Newport, England..	Mar. 29, 1841
Steam engine, rotary.....	Isaac N. Whittlesey.....	Vincennes, Ia.....	April 2, 1841
Steam engine, rotary.....	Hemon Smith.....	Sunbury, Ohio.....	June 11, 1841
Steam engine, rotary.....	J. A. Stewart.....	Cross Plains, Ten..	Oct. 11, 1841
Steam engine, rotary.....	Joseph I. Parker.....	Plymouth, Ohio.....	Mar. 28, 1832
Steam engine, rotary†.....	Joshua T. and Benjamin Deale.....	East Greenwich, Eng	July 11, 1842
Steam engine, rotary.....	Solomon M. Ebbv & David N. Phelps....	Washington, Ohio..	Aug. 26, 1842
Steam engine, rotary.....	William Jones & Rowell Farnum.....	Bradford, Vt.....	Dec. 31, 1842
Steam engine, rotary.....	Alexander K. & Wm. S. Rider.....	New York, N. Y....	April 10, 1843
Steam engine, rotary.....	Ebenezer Ferrea.....	Haverhill, N. H....	Nov. 15, 1843
Steam engine, rotary.....	Robert C. Gran.....	Pomeroy, Ohio.....	Dec. 4, 1843
Steam engine, rotary.....	Abram Pease.....	Lyons, N. Y.....	Feb. 12, 1843
Steam engine, rotary||.....	Matthew Fletcher.....	London, England....	Nov. 18, 1844
Steam engine, rotary.....	William Wright.....	Rochester, N. Y....	Sept. 9, 1845
Steam engine, rotary.....	James Miller.....	Philadelphia, Pa....	Sept. 26, 1846
Steam engine, rotary.....	James Black.....	Philadelphia, Pa....	May 30, 1846
Steam engine, rotary, and boiler.....	Caleb Tompkins.....	Montgomery, Ala....	Nov. 30, 1830
Steam engine, rotary, and boiler.....	Simon Fairman.....	Lansingburg, N. Y..	May 24, 1834
Steam engine, rotary, and boiler.....	Ethan Baldwin.....	Washington, D. C..	Jan. 13, 1835
Steam engine, rotary, changing rectilinear for.....	Peter Cooper.....	New York.....	April 26, 1826
Steam engine, rotary, double chamber.....	Joel Eastman.....	Bath, N. H.....	Feb. 18, 1831
Steam engine, rotary, Drummonds	James Moore.....	Elizabethtown, N. J	June 10, 1840
Steam engine, rotary, exhausting the case of.....	Edward Locke.....	Newport, England..	Sept. 11, 1844
Steam engine, rotary, packing....	John D. Aikin.....	Columbus, Pa.....	Mar. 19, 1840
Steam engine, rotary, propelled by water or steam.....	Peckham H. Green & Harry H. Evarts..	Mount Morris, N. Y	Mar. 9, 1842
Steam engine, rotary, propelled by 'water or steam.....	Henry Pratt.....	Great Britain.....	Mar. 28, 1842
Steam engine, rotary, or pump....	Oliver Allen.....	Norwich, Ct.....	Nov. 8, 1831
Steam engine, rotary, also applicable to pumps.....	Nicholas H. J. F. C. D. Crouy.....	Austria.....	June 14, 1843
Steam engine, rotary, rarified air.....	George Cameron.....	Washington, D. C..	Aug. 17, 1835
Steam engine, rotary, reacting....	Charles Hill.....	Zanesville, Ohio....	June 26, 1835
Steam engine, rotary, reacting....	J. G. Hodgkiss.....	New Haven, Ct.....	Nov. 7, 1835
Steam engine, rotary, reacting....	John Ingham.....	Apulia, N. Y.....	Nov. 28, 1836
Steam engine, rotary, screw, endless, for.....	Jos. Ingham & J. Davis.....	Fabius, N. Y.....	Feb. 12, 1834
Steam engine, rotary and water wheel.....	Elijah Bryan.....	New York.....	April 8, 1829
Steam engine, steam boats, &c....	John Dowers, jr.....	Philadelphia, Pa....	April 23, 1814
Steam engine, safety.....	Edward D. Tippet.....	Washington, D. C..	Nov. 23, 1836
Steam engine, slide valve to.....	W. H. Baker and H. R. Worthington.....	Brooklyn, N. Y....	May 28, 1846
Steam engine, slide valve to.....	Stephen F. Gates.....	Boston, Mass.....	Dec. 28, 1846

* Antedated, July 18, '40. † Eng. pat. dated July 13, '41. ‡ Reissued Sep. 5, '46. § Date Eng. pat. not determined.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Steam engine, applying air to the furnaces of.....	Edwin A. Stevens....	Bordentown, N. J....	April 1, 1849
Steam engine, tubes attaching to.	Gideon Freeborn....	New York.....	July 8, 1898
Steam engine, valves, cut off....	William H. Lighthall	Albany, N. Y.....	Nov. 26, 1840
Steam engine, valves, cut off.....	Horatia Allen.....	New York.....	Aug. 21, 1841
Steam engine, valves, method of connecting the action of the cut off*.....	Barnabas H. Bartol..	Coldspring, N. Y....	Sept. 20, 1841
Steam engine, valves, operating..	John Wilder.....	New York.....	Jan. 9, 1841
Steam engines, valves, opening and closing.....	Frederick E. Sickles..	New York, N. Y....	July 20, 1843
Steam engines, valves for raising the action of.....	Henry A. Morrill....	Boston, Mass.....	Dec. 20, 1843
Steam engines, valves, safety....	John S. Bakewell....	Pittsburg, Pa.....	Dec. 21, 1839
Steam engines, valves, throttle....	William Garlin.....	Providence, R. I....	Oct. 11, 1841
Steam engine, valves, working when the steam is cut off....	Robert L. Stevens and Francis B. Stevens..	New York.....	Jan. 25, 1841
Steam engine, vibrating.....	Phineas Davis.....	York, Pa.....	Feb. 17, 1821
Steam engine, vibrating.....	Nathan Rowland....	Philadelphia, Pa....	May 24, 1833
Steam engine, vibrating.....	Ebenezer A. Lester....	Boston, Mass.....	Feb. 7, 1844
Steam engine, vibrating.....	J. H. Towne.....	Philadelphia, Pa....	Jan. 10, 1845
Steam, generating†.....	Stephen T. Conn.....	Washington, D. C..	Nov. 18, 1825
Steam, generating.....	Daniel Phelps.....	Bath, N. Y.....	Nov. 14, 1826
Steam, generating.....	Levi Silliman.....	Albany, N. Y.....	Jan. 19, 1827
Steam, generating.....	John White.....	Logan co., Ky.....	May 29, 1830
Steam, generating.....	Jos. Truman & J. Cook	Bridgeport, Pa....	Jan. 24, 1833
Steam, generating.....	Isaiah Jennings....	Philadelphia, Pa....	Dec. 19, 1833
Steam, generating.....	Thomas Spaulding....	McIntosh co., Ga....	Mar. 22, 1834
Steam, generating.....	William Scarbrough..	Savannah, Ga.....	April 8, 1835
Steam, generating.....	Job Carr.....	Springborough, Ohio	Mar. 12, 1836
Steam, generating.....	John Ames.....	Springfield, Mass..	Mar. 12, 1836
Steam, generating.....	E. Nott.....	Schenectady, N. Y..	Mar. 19, 1836
Steam, generating.....	I. Jennings.....	New York.....	July 1, 1836
Steam, generating.....	M. W. Baldwin.....	Philadelphia, Pa....	Oct. 15, 1836
Steam, generating.....	William Creed.....	Boston, Mass.....	Dec. 26, 1837
Steam, generating.....	Phineas Bennett....	New York.....	Aug. 3, 1838
Steam, generating.....	Horatio Hubbell....	Philadelphia, Pa....	Aug. 6, 1838
Steam, generating, and applying..	Benjamin Phillips....	Philadelphia, Pa....	Jan. 31, 1832
Steam, generating, by anthracite coal.	D. Collins and J. D. Gallup.....	Wilkesbarre, Pa....	Oct. 12, 1826
Steam, generating, combined coking oven and boiler.....	Reuben McMillen....	Middlebury, Ohio...	Dec. 14, 1841
Steam, generating, for forging malleable iron.....	Peter J. Clute.....	Schenectady, N. Y..	May 20, 1833
Steam, generating gas.....	Eb. A. Lester.....	Boston, Mass.....	Mar. 10, 1836
Steam generator, improvement in.	Isaac N. & S. W. Leah, Jacob Deardorff, and Zachariah Beeson...	Hagerstown, Ia....	June 27, 1842
Steam, generating, and refiner....	John D. Hinkle.....	Hanover, Pa.....	Feb. 23, 1833
Steam, generating, tubular.....	R. R. Throckmorton..	New York.....	Jan. 17, 1836
Steam, for propelling boats.....	Ralph Letton.....	Albany, N. Y.....	Aug. 29, 1810
Steam, for propelling boats.....	James Rodgers.....	Albany, N. Y.....	Sept. 27, 1811
Steam, for propelling boats.—See Class 7.			
Steam, producing.....	John H. Williams....	Brunswick, N. J....	July 6, 1810
Steam power, applying to circular motion.....	Robert Dennis.....	Rahway, N. J.....	Nov. 3, 1835
Steam power, applying to locomotives.....	John Ericson.....	Kingdom of Sweden	Nov. 5, 1840
Steam power, and boiler.....	Benjamin Gates.....	Ontwa town'p, M. T	Mar. 24, 1835
Steam power, increasing.....	N. B. Goodell.....	Kirtland, Ohio.....	Jan. 23, 1839
Steam power of machinery.....	Peter Oberl.....		Dec. 18, 1813
Steam power.....	Elisha Bates.....	Mount Pleasant, Ohio	July 27, 1823
Steam, syphonic machine.....	John Poole.....		Oct. 13, 1801
Steam, shooting with.....	Samuel Morey.....	Oxford, N. H.....	Jan. 19, 1846

* Antedated March 20, 1844.

† Retained July 20, 1868.

INVENTIONS OR DISCOVERIES.	PATENTERS.	PLACES.	WHEN MADE.
Steam, supplying uniform quantity	Isaac Doolittle.....	Bennington, Vt.....	June 1, 1837
Steam valves.....	Samuel Talbott.....	Richmond, Va.....	Feb. 26, 1845
Steam wheel, (improvement on Rumsey's.)	Edward Rumsey, ex'r of James.....	Kentucky.....	Nov. 15, 1816
Steam wheel.....	Amos Thayer, jr.....	Albany, N. Y.....	Aug. 8, 1831
Steam wheel.....	William Wilson.....	Henderson co, Tenn.....	Mar. 13, 1835
Steam whistle, mode of operating.	M. W. Baldwin.....	Philadelphia, Pa.....	May 28, 1846
Steam, and working twice over...	Joseph H. Lanning...	Nashville, Tenn.....	Aug. 12, 1826
Valve.....	Thomas B. Stillman..	New York.....	Oct. 30, 1834
Valve, apparatus for lifting and regulating the closing of the valves of steam engines.....	F. E. Sickels.....	New York, N. Y.....	May 20, 1849
Valve, balance.....	Hiram Strait.....	East Nassau, N. Y.....	June 25, 1834
Valve, balance, self.....	John Kirkpatrick.....	Baltimore, Md.....	July 10, 1834
Valve, for boilers.....	David B. Lee.....	Philadelphia, Pa.....	Jan. 23, 1834
Valve, for boilers, and cam*	John Kirkpatrick.....	Baltimore, Md.....	May 29, 1835
Valve, for boilers, revolving.....	Elam Young.....	Yate township, Ohio	Sept. 10, 1829
Valve, cut-off, for steam engines.	Horatio Allen.....	New York, N. Y.....	April 30, 1842
Valve, cut-off, for steam engines.	Stephen Parks, jr....	Brooklyn, N. Y.....	June 11, 1842
Valve, engines.....	John Kirkpatrick.....	Baltimore, Md.....	May 29, 1835
Valve, face plate.....	Stacy Costill.....	Philadelphia, Pa.....	April 13, 1832
Valve, puppet.....	John Kirkpatrick.....	Baltimore, Md.....	Sept. 25, 1837
Valve, puppet, raising, &c.....	William Duff and T. Murphy.....	Baltimore, Md.....	Feb. 17, 1836
Valve, relieving.....	William Lanphier....	Alexandria, D. C.....	Sept. 2, 1826
Valve, safety.....	William S. Gilbert....	Lower 3 Runs, S. C.....	Nov. 18, 1825
Valve, safety.....	Joseph H. Schreiner..	Philadelphia, Pa.....	July 31, 1827
Valve, safety.....	Samuel Raub, jr.....	Wilkesbarre, Pa.....	Nov. 8, 1836
Valve, safety.....	John Hadley.....	Bennington, N. X.....	Mar. 10, 1838
Valve, safety, hydrostatic.....	Thomas Ewbank.....	New York.....	Aug. 27, 1831
Valve, safety, piston.....	John C. Douglass.....	New York.....	Jan. 30, 1832
Valve, screw, puppet or throttle..	E. & A. H. Young....	Newcastle, Del.....	Jan. 19, 1833
Valve, slide.....	John Stevens.....	Hoboken, N. Y.....	Mar. 16, 1816
Valve, slide.....	A. McCausland, jr....	Philadelphia, Pa.....	Feb. 10, 1834
Valve, slide.....	A. McCausland, jr....	Philadelphia, Pa.....	Feb. 10, 1836
Valve, slide.....	John Kirkpatrick.....	Baltimore, Md.....	Sept. 22, 1837
Valve, sliding.....	Thomas Halloway....	Philadelphia, Pa.....	Jan. 20, 1832
Valve, sliding.....	Andrew M. Eastwick..	Philadelphia, Pa.....	July 21, 1835
Valve, steam, for locomotive engines.....	S. H. Long.....	Philadelphia, Pa.....	Dec. 31, 1833
Valve, steam engines.....	Thomas B. Stillman..	New York.....	Oct. 30, 1834
Valve, throttle.....	Augustus S. Dawley..	Boston, Mass.....	April 18, 1834
Valve, of the vibrating steam engine.....	Thomas Halloway....	Philadelphia, Pa.....	Jan. 20, 1832
Valve, wind gudgeon.....	Thomas Halloway....	Philadelphia, Pa.....	Jan. 20, 1832

* Additional improvement, Oct. 6, 1837.

CLASS No. VII.

NAVIGATION,

And Maritime Implements, comprising all Vessels for conveyance on water, their Construction, Rigging, and Propulsion; Diving Dresses, Life Preservers, &c.

LIST OF PATENTS.

CLASS VII.—NAVIGATION, and Maritime Implements, comprising all Vessels for conveyance on water, their Construction, Rigging, and Propulsion; Diving Dresses, Life Preservers, &c.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Anchor ^a	J. J. Osborne, ass'ee of Wm. H. Porter, of Great Britain.....	New York, N. Y....	Mar. 18, 1842
Anchor, cast iron.....	James S. Stoddard...	Palmyra, N. Y....	July 2, 1836
Anchor, fagoting and making...	J. Tucker & J. Judge.	Washington, D. C..	Nov. 19, 1839
Anti-friction wheels, applicable to steamboats.....	Julian Nicolet.....	Pittsburg, Pa.....	June 12, 1835
Architecture, naval.....	John Thomas.....	Washington, D. C..	April 14, 1825
Architecture, naval.....	Christopher Hoxie...	New York.....	Feb. 11, 1834
Ark, safety.....	William Hollins.....	Baltimore, Md.....	May 4, 1824
Bales of cotton, floating them in the form of rafts.....	George R. Griffith....	Mobile, Ala.....	Sept. 25, 1841
Barge and army boats, portable safety.....	Solomon C. Batchelor.	Cincinnati, Ohio....	Jan. 20, 1841
Bending mast and truss hoops...	Jonathan Mulford....	North'n Liberties, Pa.	Jan. 16, 1835
Bilge lever, for supporting ships...	John Thomas.....	New York.....	Nov. 6, 1826
Bilge ways.....	John Thomas.....	New York.....	Oct. 10, 1829
Binnacle light.—See Class 5.			
Blocks, making.....	Eben Whiting.....	Massachusetts.....	April 1, 1802
Blocks, sheaves, moulding bushes or cogs for.....	Thomas P. Walworth	Patterson, N. J....	July 15, 1816
Blocks, sheaves of.....	Caleb Curtis & T. C. Smith.....	Boston, Mass.....	April 20, 1821
Blocks, sheaves of.....	Cyrus Alger.....	Boston, Mass.....	July 1, 1836
Blocks, sheaves of.....	E. C. Toppan.....	Essex co., Mass.....	Feb. 12, 1810
Block sheaves, anti-friction bush for.....	Nathaniel H. Lewis..	New York.....	Aug. 26, 1818
Block sheaves, cast iron, for ship- ping.....	James Rudder.....	Norfolk, Va.....	Feb. 6, 1819
Block sheaves, friction bushes or boxes for.....	Francis Seymour.....	Plymouth, Mass...	Dec. 29, 1827
Block sheaves, and pulling blocks, moulding and casting.....	Lewis Aspinwall....	Albany, N. Y....	April 22, 1835
Block sheaves, or pulleys, bush- ing, and pins for.....	Henry Worrall.....	New York.....	June 12, 1816
Block sheaves, rollers for.....	Moses H. Marshall...	Gloucester, Mass...	July 10, 1834
Blocks, ship's, cutting sheaves...	Mark Loughton.....	Portsmouth, N. H..	Mar. 14, 1810
Blocks, ship's, and dead eyes...	Thomas Blanchard...	New York.....	Aug. 31, 1836
Blocks, ship's, finishing wooden sheaves.....	Thomas Blanchard...	New York.....	Aug. 10, 1836
Blocks, ship's, forming end pieces	Thomas Blanchard...	New York.....	Aug. 1, 1836
Blocks, ship's, forming or shaping cheeks.....	Thomas Blanchard...	New York.....	Aug. 10, 1836
Blocks, ship's, mortising & boring	Thomas Blanchard...	New York.....	Aug. 31, 1836
Blocks, ship's, riveting plank...	Thomas Blanchard...	New York.....	Aug. 10, 1836
Blocks, ship's, rounding edges...	Thomas Blanchard...	New York.....	Aug. 10, 1836
Blocks, ship's tackle, countersink- ing, &c.....	Thomas Blanchard...	New York.....	Aug. 10, 1836
Blocks, ship's.—See Wheel Hubs, Blocks, and snatch blocks.....	Thomas Blanchard...	New York.....	Aug. 31, 1836
Blocks, tackle, & pulleys, of metal	James Evans.....	Charlestown, Mass.	Dec. 6, 1826
	James Barron.....	Philadelphia, Pa....	Oct. 20, 1834

^a English patent, dated Aug. 16, 1839.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Blocks, used in building vessels..	John Williston.....	Portsmouth, Va....	Nov. 6, 1891
Blocks & wedges, for raising ships	John Thomas.....	Washington, D. C....	May 17, 1892
Blubber, knife.....	William Ball.....	New York.....	April 25, 1892
Blubber, mincing whales.....	Benjamin Taber.....	Fair Haven, Mass....	Aug. 11, 1891
Boat, improvement in.....	Rufus Porter.....	Billerica, Mass.....	May 26, 1894
Boats, for ascending rivers.....	David Grieve.....	Massachusetts.....	Feb. 24, 1891
Boats, anti-steam.....	William Wadsworth..	Hartford, Conn.....	July 17, 1895
Boats, and arks.....	Thomas Symington..	Baltimore, Md.....	July 22, 1893
Boats, canal.....	Benjamin Phillips..	Philadelphia, Pa....	April 21, 1892
Boats, canal.....	Benajah Williams....	Mendon, N. Y.....	Mar. 3, 1899
Boats, canal.....	Thomas W. Bakewell..	Cincinnati, Ohio....	Aug. 25, 1899
Boats, canal.....	Ezra Reed.....	Pottstown, Pa.....	April 6, 1893
Boats, canal.....	John McCausland....	Norfolk co., Va....	June 14, 1894
Boats, canal.....	Edward Randolph....	Salt Creek, Ohio....	Jan. 9, 1896
Boats, canal.....	John H. Long.....	Lewistown, Pa.....	April 5, 1896
Boats, canal, bays.....	Abraham Morrison...	Johnstown, Pa.....	May 15, 1897
Boats, canal, constructing in sections, and the manner of uniting them.....	Robert Frazer.....	Waynesburg, Pa....	Sept. 10, 1840
Boats, canal, passage.....	Jacob Bromwell.....	Cincinnati, Ohio....	June 23, 1829
Boats, canal, passing up and down elevations.....	Robert Graves.....	Brooklyn, N. Y.....	July 26, 1827
Boats, canal, propelled by steam.	Francis A. Dorman...	Norfolk, Va.....	Mar. 7, 1833
Boats, canal, propelled by steam.	Anthony Plantou.....	Philadelphia, Pa....	April 23, 1834
Boats, canal, and rivers.....	Silvester Doolittle....	Utica, N. Y.....	Nov. 19, 1833
Boats, canal, and rivers.....	Anthony Plantou.....	Philadelphia, Pa....	Mar. 18, 1835
Boats, canal, sheet iron, twin...	Leeman Parmelee....	Poughkeepsie, N. Y.	Nov. 26, 1835
Boats, canal, transporting from one level to another.....	Robert P. Bell.....	New York.....	July 13, 1827
Boats, canal, transhipment of merchandise.....	James O'Conner.....	Philadelphia, Pa....	Oct. 14, 1835
Boats, chain, for inland navigation	Gordon Saltonstall...	Society Hill, S. C....	July 12, 1834
Boats, cylinder.....	Amos Kendall.....	Washington, D. C....	Sept. 2, 1834
Boats, for descending rapid streams	David Keller.....	Pennsylvania.....	Nov. 5, 1799
Boats, engines, for unloading and removing weights.....	Thomas Potter, sen...	Bowling Green, Ky..	Dec. 17, 1834
Boats, ferry.....	Thomas Cahoon.....	Pittsfield, Mass....	June 25, 1813
Boats, ferry.....	Matthew D. Brown....	Buffalo, Va.....	Oct. 1, 1830
Boats, fishing.....	John Donn.....	Washington, D. C....	Mar. 6, 1835
Boats, flat bottomed, with moveable keel.....	Samuel Buel.....	Burlington, Ct.....	July 7, 1810
Boat, India rubber, portable.....	Horace H. Day.....	New York, N. Y.....	Jan. 15, 1846
Boats, insubmersible.....	Ab. Du Buc Marentille	.....	Dec. 23, 1802
Boats, iron.....	Thomas J. Bond.....	Baltimore, Md.....	Dec. 21, 1820
Boats, life and anchor.....	Joseph Francis.....	New York, N. Y.....	Jan. 11, 1839
Boats, life constructing.....	George James.....	Philadelphia, Pa....	Jan. 21, 1839
Boats, life and other.....	Joseph Francis.....	New York, N. Y.....	Mar. 26, 1841
Boats and ether vessels of sheet iron.....	Joseph Francis.....	New York.....	Mar. 26, 1845
Boats, for passing up rapids.....	Lemuel Thwing.....	Dedham, Mass.....	Aug. 12, 1820
Boats, passing over dams.....	Stephen Underwood..	Bath, N. H.....	Mar. 19, 1836
Boats, portable, screw.....	Joseph Francis.....	New York.....	April 23, 1833
Boats, for rapids.....	F. W. Geissenheimer..	New York.....	Jan. 14, 1814
Boats and rafts, passing.....	Benning Sanborn....	Lyman, N. H.....	April 11, 1836
Boats, for rivers.....	N. C. Dawson and A. Rucker.....	Pedlar's Mills, Va..	April 3, 1821
Boats, rocking or lever.....	Bennet Lies.....	New York.....	June 20, 1815
Boats, sub-marine gun.....	Daniel Fitzgerald....	New York.....	Oct. 11, 1841
Boats, towing on canals.....	Thomas Jackson.....	Reading, Pa.....	June 25, 1839
Boats, for transportation of passengers.	N. Cushman & Isaac Loomis.....	White Hall, N. Y....	Jan. 8, 1831
Boats, for travelling on ice.....	Thaddeus Chapin....	Canandaigua, N. Y..	Sept. 14, 1836
Boats, twin.....	Charles Harris.....	Norfolk, Va.....	May 27, 1834
Boats, to be used under water....	Edward P. Fitzpatrick	Mount Morris, N. Y.	Feb. 12, 1836

* Antedated July 11, 1836.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCES.	WHEN ISSUED.
Boats, worked by quadrupeds...	David Porter.....	Washington, D. C..	Feb. 8, 1826
Bolts.—See Class 2.			
Booms, saddle and jaws for.....	James Davis, jr.....	Gloucester, Mass...	Dec. 31, 1845
Bulkhead, water tight, for steam-boats.....	Ruggles Whiting.....	Louisville, Ky.....	June 6, 1826
Buoy, life.....	William Flower.....	Philadelphia, Pa....	May 14, 1806
Cables, chain.—See Class 2.			
Cables, chain and hemp, proving.	John Judge.....	Washington, D. C..	Nov. 29, 1826
Cables, chain, stopper for.....	M. P. Mix.....	New York.....	Nov. 3, 1838
Cables, improving the quality....	Nathaniel Cutting.....	Washington, D. C..	July 14, 1806
Canal navigation, by boats.....	Samuel D. Ingham.....	New Hope, Pa.....	April 19, 1831
Canal steamboat.....	Robert Hugunin.....	Albany, N. Y.....	Mar. 24, 1823
Canal steamboat.....	John F. Wright.....	Erie, Pa.....	Feb. 14, 1826
Capstan.....	Andrew Morse.....	Boston, Mass.....	Mar. 12, 1836
Capstans for ships.....	Calvin Oaks.....	Rochester, N. Y....	May 16, 1835
Capstans for ships.....	Increase Wilson & F. D. Beckwith.....	New London, Conn.	June 15, 1837
Capstans or windlasses, ships and cable stoppers*.....	John Grylls.....	Great Britain.....	Dec. 12, 1842
Caulking ships and other vessels.	Nicholas W. Chavalier	Baltimore, Md.....	Dec. 27, 1831
Centre board, to increase the speed of vessels.....	Garrett Fontaine.....	Staten Island, N. Y.	Mar. 15, 1825
Chain safety, for hauling down ships.	James Fales and Thos. B. Brown.....	Bedford, Mass.....	Mar. 9, 1833
Chair, marine.....	Ab. Du Buc Marentille	New Jersey.....	Mar. 18, 1803
Compass, mariner's.—See Class 8.			
Composition for vessels' bottoms.	—See Class 4.		
Constructing boats.....	William Hopkins.....	Connecticut.....	May 13, 1803
Constructing boats.....	Thomas Thorpe.....	Washington, D. C..	Aug. 31, 1827
Constructing boats, safety hulls...	G. W. Eddy.....	Waterford, N. Y....	Feb. 28, 1834
Constructing boats and vessels...	Francis Rotch.....	New Bedford, Mass.	Nov. 29, 1811
Constructing boats and vessels...	Francis Rotch.....	Philadelphia, Pa....	Aug. 3, 1812
Constructing boats and vessels...	William Annesley.....	New York.....	Sept. 12, 1816
Constructing boats and vessels...	Albert Dorman.....	Norfolk, Va.....	Oct. 25, 1832
Constructing canal boats, so that they can be transferred on railroad cars.....	John Dougherty.....	Philadelphia, Pa....	Feb. 24, 1843
Constructing decks of ships.....	John Bearce.....	Bristol, Me.....	Feb. 7, 1833
Constructing paddle wheels, and combining the same with steam vessels.....	Alexander Connison...	Newark, N. J.....	June 18, 1842
Constructing ships.....	Samuel E. Howell.....	Vincent town, N. J.	Aug. 31, 1837
Constructing ships.....	David M. Randolph...	Richmond, Va.....	Aug. 2, 1815
Constructing ships.....	Abel Brewster.....	Hartford, Ct.....	Mar. 6, 1820
Constructing ships.....	Charles Olcott.....	Medina, Ohio.....	Aug. 15, 1835
Constructing ships.....	Jos. R. Deming.....	New York.....	April 15, 1831
Constructing ships.....	Fred. Tudor.....	Boston, Mass.....	Dec. 17, 1812
Constructing ships and boats.....	William Phœbus.....	New York.....	June 27, 1810
Constructing ship's ceiling.....	Andrew M. Frink.....	New London, Conn.	Dec. 31, 1833
Constructing ships, and navigating	Benjamin Conner.....	Portsmouth, N. H..	Aug. 26, 1819
Constructing ships and vessels...	Jer. Brown.....	Rhode Island.....	May 14, 1800
Constructing ships and vessels...	Henry Higginson.....	Boston, Mass.....	April 4, 1826
Constructing steamboats.....	Henry Burden.....	Troy, N. Y.....	Mar. 8, 1834
Constructing ships, boats, &c., to be propelled by steam.....	Elisha F. Alrich.....	New York, N. Y....	July 8, 1842
Constructing steamboats, &c., to prevent them from sinking when coming in collision.....	Horace D. Forbes...	New York, N. Y....	Feb. 16, 1843
Constructing steam ships, propelling and turning.....	Robert L. Stevens...	New York, N. Y....	Oct. 17, 1842
Constructing vessels.....	James Barron.....	Philadelphia, Pa....	April 5, 1833
Constructing vessels†.....	William Annesley.....	Albany, N. Y.....	Nov. 6, 1830
Constructing vessels.....	Thomas W. Bakewell	Cincinnati, Ohio....	Feb. 21, 1827

* English patent, dated Dec. 31, 1840.

† October 7, 1844, extended by act of Congress for seven years, from Nov. 6, 1844.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Constructing vessels.....	Daniel Gerrish.....	Boston, Mass.....	July 2, 1806
Constructing vessels, floating.....	John Denny.....	Queen Ann co., Md.....	Oct. 3, 1822
Constructing vessels, with crooked keels.....	Eliphalet Beebe.....	Pennsylvania.....	April 27, 1803
Cordage, manufacture of.....	Benjamin F. Adams.....	New Bedford, Mass.....	June 13, 1846
Dead eyes, for cutting and boring lanyard scores.....	Thomas Blanchard.....	New York.....	Aug. 10, 1836
Disengaging horses in navigating canals.....	Gottlieb Shultz.....	Philadelphia, Pa.....	Sept. 9, 1835
Diving dress.....	Chauncey Hall.....	Connecticut.....	Dec. 24, 1810
Diving dress.....	John R. Cambell.....	Boston, Mass.....	Nov. 30, 1836
Diving dress.....	William S. Taylor.....	New York.....	Jan. 20, 1838
Diving machine.....	Richard Tripe.....	Dover, N. H.....	April 1, 1806
Diving, mode of.....	William Brookfield.....	Detroit, Mich.....	July 17, 1820
Diving suit.....	William C. Davidson and Daniel Clark.....	Pittsburg, N. Y.....	July 26, 1824
Diving suit.....	Nathaniel Woleott.....	Sidney, N. Y.....	April 17, 183
Diving suit.....	Fowler Smith & Lewis S. Steele.....	Norfolk, Va.....	April 23, 1834
Diving suit, elastic.....	Leonard Norcross.....	Dixfield, Maine.....	June 14, 1834
Dowelling bit, used in ship building.....	John Thomas.....	Washington, D. C.....	April 2, 1825
Explorer, submarine.....	Sewall Short and Noah Bradford.....	Barnstable, Mass.....	Feb. 18, 1830
Fender, to protect boats against injury from snags and sawyers.....	Joseph W. Kirk.....	Philadelphia, Pa.....	Feb. 24, 1843
Fender, for steamboats.....	E. C. Genet.....	New York.....	Sept. 9, 1825
Fids, for ships' masts.....	Benjamin Rotch.....	Bristol, England.....	Dec. 10, 1823
Fish vessels and nets.....	James Wells, jr.....	Galloway, N. J.....	Dec. 17, 1814
Floating batteries.....	Prosper Martin.....	Philadelphia, Pa.....	Aug. 11, 1841
Floating battery, steam ship.....	George Stiles.....	Baltimore, Md.....	April 4, 1815
Floating machine, supplying ships with fresh water.....	John F. Randolph.....	New York.....	April 25, 1811
Floating wheel.....	Stacy Costill.....	Philadelphia, Pa.....	Oct. 17, 1827
Friction, lessening, in canal boats.....	Peter Freeman.....	Morris county, N. J.....	June 1, 1825
Gaff of sail, vessel's.....	John Brown.....	Stonington, Conn.....	Dec. 31, 1838
Grapling irons, for raising bodies.....	Ebenezer and Thomas J. Lobdell.....	Plymouth and Boston, Mass.....	Aug. 18, 1837
Guard, explosion.—See Explosion.	Class 6.		
Gum elastic, applying to vessels.....	George Duncan Cooper.....	New York.....	Jan. 7, 1835
Harpoon.....	James Long.....	Maryland.....	Aug. 5, 1819
Harpoon.....	Dexter H. Chamberlain.....	Boston, Mass.....	Aug. 17, 1835
Harpoon.....	Jonathan Sizer, 2d.....	New London, Conn.....	Oct. 16, 1820
Harpoon.....	William Carsley.....	New Bedford, Mass.....	July 23, 1841
Harpoon.....	Albert Moore.....	Hampden, Maine.....	Mar. 16, 1844
Hatches, preventing from leaking.....	Richard C. Holmes.....	Cape May, N. J.....	Mar. 7, 1846
Ice breaking machine.....	John Williams.....	Georgetown, D. C.....	Mar. 2, 1813
Ice breaker.....	Michael Freytag.....	Philadelphia, Pa.....	July 2, 1836
Ice breaker.....	Barnabas Gillespie.....	New York.....	Mar. 8, 1837
Ice breaker.....	Walter Hunt and J. Townsend.....	New York.....	Oct. 3, 1838
Ice breaker for boats and other vessels.....	Samuel Nicholson.....	Boston, Mass.....	July 16, 1844
Ice cutting.....	Nathaniel J. Wyeth.....	Cambridge, Mass.....	Mar. 18, 1829
Ice cutting machine.....	Samuel Trask.....	Hallowell, Maine.....	April 21, 1836
Ice steamboat.....	Robert Irvin.....	Baltimore, Md.....	Jan. 12, 1832
Keels of vessels.....	Gilbert Livingston.....	New York.....	Oct. 22, 1803
Keels of vessels, false.....	Philander Hall.....		April 2, 1816
Keels of vessels, swinging.....	Josiah Beale.....	Alexandria, D. C.....	Jan. 15, 1812
Keels and keelsons, of keelboard vessels.....	James Wiltse.....	Fishkill, N. Y.....	May 4, 1821
Lanyards, chain.....	Robert Rogers.....	Dover, N. H.....	Feb. 6, 1823
Lee board.....	Jac. Swain, H. Swain, and Josh. Swain.....	Cape May c. h., N. J.....	April 10, 1811

* Disclaimers, Oct. 24, 1840.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Lexodromic pulley, for measuring ship's way.....	John S. Donlery.....	New York.....	Sept. 21, 1815
Life boat.....	Lewis Raymond.....	New York, N. Y....	Feb. 4, 1843
Life preserver, for the use of steam boats.....	Michael Pearson.....	Newburyport, Mass.	Jan. 27, 1843
Life preserver.....	Henry G. De Grandval	Portsmouth, N. H....	Oct. 3, 1817
Life preserver.....	Ralph Bulkley.....	New York.....	May 8, 1840
Life preserver.....	Henry B. Bourne.....	New York.....	May 8, 1840
Life preserver.....	Adoniram Chandler...	New York.....	Oct. 3, 1844
Life preserver, applicable as buoys, rafts.*	J. Francis, assignee of C. Aug. de Liancourt	New York..... } France..... }	May 10, 1844
Life preserver, or buoyant dress..	Rufus Porter.....	Bellerica, Mass.....	May 25, 1840
Life preserver, or buoyant dress..	Napoleon E. Guérin..	New York, N. Y....	Nov. 16, 1841
Life preserver.—See Class 3, Hats, buoyant.			
Life preservers, rendering chairs, &c., buoyant.....	William H. Shecut...	New York, N. Y....	Mar. 9, 1842
Life preserver, safety.....	John J. White.....	Philadelphia, Pa....	April 7, 1838
Lifting ships out of water.....	Thomas Ballard, ass'te of Thomas Evans...	New York.....	May 28, 1830
Lights, glass, for ships.....	Joshua Oaks.....	Boston, Mass.....	May 11, 1822
Lights, glass, for decks of ships..	George Gray.....	Lynn, Mass.....	Mar. 26, 1825
Log, for ships.....	Chester Gould.....	Philadelphia, Pa....	May 27, 1799
Mallet, screwing and worming...	John B. Petitval....	Charleston, S. C....	July 11, 1837
Marine railway.—See Class 9.			
Mast and truss hoop, bending....	Jonathan Mulford....	North Liberties, Pa.	Jan. 16, 1835
Metallic compound, for sheathing ships.—See Class 4.			
Mercantile house, navigable.....	Roger Haskell.....	Geneva, N. Y.....	July 7, 1821
Moulds, for shaping timbers of boats.....	James Wallace.....	Rochester, N. Y....	Aug. 9, 1831
Navigating and ferrying rivers...	Ed. Clark.....	Philadelphia, Pa....	June 25, 1823
Navigating rivers.....	Joseph Godley.....	Alexandria, N. J....	Feb. 22, 1823
Navigating rivers in shoal waters.	Michael Williams....	Albany, N. Y.....	Feb. 24, 1809
Navigation, improvement in.....	Anthony Hunn.....	Danville, Ky.....	Mar. 24, 1804
Navigation, improvement in.....	John J. Giraud.....	Baltimore, Md.....	Jan. 31, 1827
Navigation, machinery used in...	Adolph Heilbronn....	New York.....	Mar. 16, 1829
Navigation, machinery used in...	Franklin G. Smith....	Lynchburg, Va.....	Oct. 12, 1830
Navigating and propelling vessels by wind and waves†.....	John A. Etzler.....	Philadelphia, Pa....	April 1, 1842
Navigation, steam, by which the submerged propeller is made to operate as an air pump and condenser.....	William W. Hunter...	Gosport, Va.....	Mar. 12, 1842
Navigation, steam.....	John M. Patton.....	Milton, Pa.....	Feb. 4, 1830
Navigation, steam, &c., application	William W. Van Loan	New York.....	Jan. 15, 1831
Navigation, steam, internal.....	James Renwick.....	New York.....	Nov. 7, 1823
Oar head.....	Cornelius Seaman....	Washington co., Md.	Aug. 15, 1817
Oar head.....	John Orbison.....	Piqua, Ohio.....	May 27, 1820
Parcelling rope‡.....	Obed Kempton.....	New Bedford, Mass.	Sept. 25, 1837
Pedometer, sea.—See Class 8.			
Perambulator, nautical.....	Amos Whittimore...	Massachusetts.....	Nov. 19, 1796
Planking vessels.....	John Thomas.....	Washington, D. C..	Dec. 2, 1822
Planking vessels.....	Wm. Scarbrough.....	Darien, Ga.....	May 19, 1824
Planking vessels.....	Thomas Blanchard...	New York.....	Mar. 20, 1834
Ploughing, submarine.—See Extra Class 9.			
Plugs, cutting.....	James Josselyn.....	New York.....	May 3, 1828
Plugs, cutting, for waists and decks of ships.....			
Plugs, cutting, for ships, by a centre point spring bit.....	Chris. Josselyn.....	New York.....	June 28, 1826
Plugs, and trunnel geared machine, for ships.....	Daniel Flint.....	Nobleborough, Me..	April 19, 1832
Power, maintaining, applied on board ships.....	Jesse Reed.....	Marshfield, Mass...	July 22, 1838
Preserving timber under water...	David Pearson.....	Newbury, Mass....	Jan. 24, 1816
	George Lovett.....	New York.....	April 1, 1815

* Patented in France, Nov. 10, '44.

† Antedated Nov. 20, '41.

‡ Antedated Mar. 25, 1837.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Preserving vessels from decay, by charcoal	Anthony Plantou	Philadelphia, Pa.	Oct. 1, 1825
Preserving vessels from worms ..	Raphael Peale	Newbury, Mass.	Dec. 14, 1798
Preserving wood from marine insects.	Robert L. Nichols ...	Easton, Md.	Feb. 23, 1811
Propeller.	Horatio Hubbell.	Moyamensing, Pa.	July 14, 1845
Propeller.	Leonard Phleger.	Wilmington, Del.	Sept. 13, 1845
Propeller.	George W. Fulton	Brazoria, Texas.	Aug. 26, 1846
Propeller, compensating.	Josephus Echols.	Columbus, Ga.	May 9, 1846
Propellers, mode of elevating and depressing	R. F. Loper	Philadelphia, Pa.	Nov. 26, 1845
Propeller, screw.	John Ericsson.	New York.	Sept. 9, 1845
Propellers, shipping and unshipping	Stephen R. Parkhurst.	New York.	Nov. 26, 1845
Propeller, spiral, for boats.	Josiah Copley.	Warrior Marsh, Pa.	May 22, 1830
Propeller, submarine.	John L. Sullivan.	Boston, Mass.	Mar. 24, 1817
Propeller, submerged.	Samuel B. Howd	Arcadia, New York.	June 14, 1845
Propelling, alternate lever for.	Robert Smith.	Port Gibson, Miss.	June 9, 1825
Propelling ball proof vessels, by steam applied under water.	Thomas Gregg	Connellsville, Pa.	Mar. 19, 1813
Propelling boats.	Daniel Keller.	Pennsylvania.	May 25, 1795
Propelling boats.	John Martin.	New York.	Nov. 21, 1797
Propelling boats.	Josiah Shackford	New York.	Mar. 21, 1799
Propelling boats.	William Bell.	Pennsylvania.	Nov. 24, 1803
Propelling boats.	John Heavin.	Montgomery co., Pa.	April 17, 1806
Propelling boats.	James A. Pearce.	Louisville, Ky.	April 7, 1807
Propelling boats.	Philemon Heaton, M. B. Boyes, and Philemon Heaton, jr. ....	.....	Mar. 4, 1808
Propelling boats.	William Wadsworth.	Hartford, Conn.	Mar. 15, 1808
Propelling boats.	A. G. D. Tuthill.	New York.	Mar. 22, 1812
Propelling boats.	Gabriel Manny.	Montgomery, N. Y.	June 8, 1815
Propelling boats.	J. P. Durand.	New York.	Jan. 17, 1818
Propelling boats.	Jos. Cerneau.	New York.	Mar. 6, 1818
Propelling boats.	John J. Giraud.	Baltimore, Md.	April 10, 1818
Propelling boats.	Rennet St. Deprest.	New York.	May 9, 1818
Propelling boats.	Thomas Kearsing.	New York.	June 6, 1818
Propelling boats.	Henry Farnham.	Albany, N. Y.	Sept. 5, 1818
Propelling boats.	Abm. Taylor.	New York.	Nov. 18, 1818
Propelling boats.	Jer. Gray.	Peekskill, N. Y.	Nov. 18, 1818
Propelling boats.	Abm. Bartholomew.	Albany, N. Y.	Dec. 1, 1818
Propelling boats.	James Lyon.	Statesburg, S. C.	April 3, 1819
Propelling boats.	John J. Giraud.	Baltimore, Md.	April 19, 1820
Propelling boats.	Jacob Coon and Benj. Hyde.	Hartford, N. Y.	July 11, 1820
Propelling boats.	J. C. Chittenden and A. W. Delano.	Stephenson, N. Y.	May 1, 1823
Propelling boats.	Henry R. Teller.	Schenectady, N. Y.	Sept. 28, 1825
Propelling boats.	Chauncey Crafts.	Woodbury, Conn.	Mar. 29, 1826
Propelling boats.	Elisha Fuller.	Providence, R. I.	Mar. 2, 1827
Propelling boats.	Josiah White.	Mauch Chunk, Pa.	June 11, 1829
Propelling boats.	Timothy Beach.	Wilmington, Ohio.	April 2, 1830
Propelling boats.	Benj. M. Smith.	Rochester, N. Y.	Nov. 20, 1831
Propelling boats.	Jarvis Ring.	Ogden, N. Y.	Oct. 25, 1832
Propelling boats.	William Burk.	Whitemarsh, Pa.	Dec. 2, 1834
Propelling boats.	Gideon Hotchkiss.	Windsor, N. Y.	June 2, 1836
Propelling boats.	Philander Noble.	Westfield, Mass.	Jan. 20, 1836
Propelling boats.	Philip C. Traver.	Rhinebec, N. Y.	April 30, 1843
Propelling boats.	James H. Street.	Philadelphia, Pa.	Dec. 27, 1843
Propelling boats across ferries.	Stephen Ross.	Troy, N. Y.	Oct. 30, 1828
Propelling boats by animal power	Henry Voigt.	Philadelphia, Pa.	Aug. 10, 1791
Propelling boats by animal power	Moses Rogers.	New York.	Feb. 9, 1814
Propelling boats by animal power	Moses Rogers.	New York.	Mar. 3, 1815

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	DATE GRANTED.
Propelling boats, apparatus for...	Samuel Stillwell and Dan'l T. Wandell ..	New York.....	June 3, 1808
Propelling boats, &c., apparatus for, &c.....	Hugh Ronalds.....	Albion, Illinois.....	Dec. 14, 1840
Propelling boats, &c., canal and others	Wm. Leavenworth...	New York, N. Y....	April 18, 1839
Propelling boats on canals, &c., by steam	Mellen Battel.....	Albany, N. Y.....	Oct. 14, 1840
Propelling boats, by application of condensed air.....	John L. Sullivan.....	Boston, Mass.....	Mar. 24, 1817
Propelling boats, or carriages.....	Timothy Davis.....	Lawrence, Ind.....	Mar. 15, 1828
Propelling boats, or carriages, &c.....	Barnabas Langdon...	Whitehall, N. Y....	Feb. 22, 1817
Propelling boats, canal, &c.....	Levi Burnell.....	Elyria, N. Y.....	May 21, 1834
Propelling boats, canal, &c.....	John Finley.....	Baltimore, Md.....	April 17, 1837
Propelling boats, canal.....	Nathaniel Bingham & Pliny Warner.....	Rochester, N. Y....	Dec. 15, 1828
Propelling boats, canal, &c.....	Samuel D. Bennett...	Butternuts, N. Y....	Jan. 30, 1829
Propelling boats, canal.....	Jer. Smith and John Brown	New York.....	Nov. 19, 1833
Propelling boats, double stern, wheel for.....	John L. Sullivan.....	Boston, Mass.....	Dec. 10, 1818
Propelling boats, elastic floor for...	Oliver Phelps.....	Lansing, N. Y.....	Nov. 17, 1821
Propelling boats by endless chains of paddles.....	Appleton Bragg.....	New York.....	Jan. 24, 1842
Propelling boats and extinguishing fire.....	Stephen Bates & Geo. Titcomb.....	Boston, Mass.....	Mar. 4, 1842
Propelling canal and other boats..	Henry R. Worthington	New York.....	Feb. 2, 1844
Propelling canal boats, &c.....	Josephus Echols.....	Columbus, Ga.....	Nov. 26, 1845
Propelling canal boats and other vessels.....	Wm. P. McConnell...	Washington, D. C..	May 16, 1846
Propelling boats, ferry.....	Robert Spedden.....	Easton, Md.....	Aug. 26, 1819
Propelling boats, horse power...	Daniel French & Pliny Bliss.....	Hamilton, Ohio....	Jan. 22, 1820
Propelling boats, horse power...	William P. Sprague...	Pennsylvania.....	June 19, 1795
Propelling boats, horse power...	Rodman Bowne.....	New York.....	July 18, 1816
Propelling boats, horse power...	Moses Crafts.....	Troy, N. Y.....	Feb. 13, 1809
Propelling boats, horse power...	Salmon Fuller.....	Clark county, Ind...	Feb. 19, 1811
Propelling boats, horse power...	David Dunham.....	New York.....	June 28, 1814
Propelling boats, horse power...	Moses Isaacs.....	Philadelphia, Pa....	Mar. 17, 1818
Propelling boats, horse power...	Barnabas Langdon & Jno. C. Langdon...	Troy, N. Y.....	June 5, 1819
Propelling boats, horse power...	Barnabas Langdon...	Troy, N. Y.....	May 1, 1821
Propelling boats, hydraulic, against currents.....	William Shultz.....	Philadelphia, Pa....	Mar. 28, 1812
Propelling boats, hydraulic apparatus	Benjamin Phillips...	Philadelphia, Pa....	Aug. 16, 1826
Propelling boats by jets of water ..	Thomas W. Reily...	McMinn co., Tenn...	Jan. 24, 1842
Propelling boats, by levers and weights	John T. Schenck....	New York.....	Oct. 23, 1812
Propelling boats, by lever wheels...	Roswell Hopkins....	Hopkinson, N. Y..	Mar. 25, 1808
Propelling boats, machinery for...	William R. Lowerie...	Flushing, N. Y....	Mar. 29, 1820
Propelling boats, machinery for...	John J. Giraud.....	Baltimore, Md.....	Jan. 3, 1821
Propelling boats, by man power...	Alexander Renoir...	New Orleans, La...	July 20, 1831
Propelling boats, method of.....	Meredith Mallory....	Urbana, N. Y.....	Aug. 4, 1841
Propelling boats, &c., oblique paddle propeller.....	Ralph Bulkley.....	New York.....	Mar. 13, 1844
Propelling boats and other vessels...	Benj. D. Beecher....	Prospect, Conn.....	Dec. 31, 1839
Propelling boats and other vessels...	Gerret Urkson.....	Pittsburg, Pa.....	Mar. 26, 1845
Propelling boats by pumps	Mayer Ulman & Moses Isaacs.....	Philadelphia, Pa....	Mar. 17, 1818
Propelling boats, by a revolving lever	Lewis Marchand.....	Blakely, Ala.....	July 10, 1822
Propelling boats, rowing.....	William Shaw.....	Otsego, N. Y.....	Feb. 19, 1812
Propelling boats, screw for.....	Edw. P. Fitzpatrick..	Mount Morris, N. Y	Nov. 23, 1835

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Propelling boats, by screw wheel.	James Widdefield....	Philadelphia, Pa....	Oct. 11, 1836
Propelling boats, by screw wheel.	John L. Smith	Charleston, S. C....	Sept. 18, 1835
Propelling boats, by screw power	Henry W. Wheatly..	New York.....	Dec. 30, 1818
Propelling boats, &c., segment spiral propellers	John Laing	Anne Arundell, Md.	Oct. 22, 1842
Propelling boats, by setting poles.	Robert Kenny.....	Augusta county, Va.	June 17, 1820
Propelling boats, ships*	Elisha F. Aldrich	New York.....	July 30, 1841
Propelling boats, by steam	John Fitch.....	Philadelphia, Pa....	Aug. 26, 1791
Propelling boats, by steam	Jehosaphat Starr	Connecticut.....	April 28, 1797
Propelling boats, by steam	Nich. J. Roosevelt..	New Jersey.....	Dec. 1, 1814
Propelling boats, by steam	William Tatham....	Washington, D. C..	April 8, 1816
Propelling boats, by steam	Samuel Bolton.....	Philadelphia, Pa....	Nov. 1, 1810
Propelling boats, by steam.—See Class 6.			
Propelling boats, by step wheel..	F. Waterman, 3d....	Washington, D. C..	May 9, 1823
Propelling boats, by two-horse engine			
Propelling boats and vessels	Benjamin F. Joslin..	Schenectady, N. Y.	Aug. 21, 1824
Propelling boats and vessels	James Rumsey	Berkley county, Va.	Aug. 26, 1791
Propelling boats and vessels	Alexander Anderson	Philadelphia, Pa....	Aug. 21, 1812
Propelling boats and vessels	William J. Lewis....	Virginia.....	Feb. 3, 1819
Propelling boats or vessels	David Cooke	Jersey city, N. J....	April 16, 1819
Propelling boats and vessels	John J. Giraud.....	Baltimore, Md.....	Dec. 12, 1826
Propelling boats, on water or land	Benjamin Taylor....	New York.....	April 25, 1808
Propelling boats, by weights.....	Moses Martin.....	Woodbridge, N. J....	July 8, 1816
Propelling boats, by wings.....	Jos. S. Dyster.....	Baltimore, Md.....	Feb. 9, 1820
Propelling boats, working mills..	William Shaw.....	Otsego, Y. Y.....	June 5, 1812
Propelling, chain paddle wheel for	Andrew Rogers.....	Middletown, Pa....	April 6, 1830
Propelling, circular levers for....	John Turner.....	Marcellus, N. Y....	Mar. 12, 1825
Propelling, inside lever wheel for.	John J. Giraud.....	Baltimore, Md.....	Dec. 1, 1822
Propelling paddles for boats.....	Richard Claiborne..	Virginia.....	Feb. 23, 1802
Propelling paddles for boats.....	Philip E. Barbour..	Louisville, Ky.....	Jan. 27, 1825
Propelling paddles for boats.....	John Cochran.....	Baltimore, Md.....	April 28, 1836
Propelling paddles for boats.....	John J. Greenough..	Boston, Mass.....	Aug. 18, 1837
Propelling paddles for boats.....	Isaac McCord.....	Harrisburg, Pa....	Sept. 22, 1838
Propelling paddles, buckets.....	A. R. Chase.....	Cincinnati, Ohio...	Nov. 9, 1842
Propelling paddles, chain.....	Azazel Pierson.....	Cumberland co. N.J.	Mar. 2, 1811
Propelling paddles, and chain wheel	Robert R. Livingston	Clermont, N. Y....	June 13, 1812
Propelling paddles, folding boat..	Ebenezer Jenks....	Clebrook, Conn....	June 6, 1817
Propelling paddles, or flutter wheels	William Thornton...	Washington, D. C..	Dec. 23, 1814
Propelling paddles, ships.....	John L. Sullivan....	Boston, Mass.....	April 28, 1818
Propelling paddles, used as ice breakers.....			
Propelling paddles, water.....	Wash'gton Van Dusen	Kensington, Pa....	July 29, 1837
Propelling paddle wheels.....	J. J. Giraud.....	Baltimore, Md.....	Sept. 18, 1827
Propelling paddle wheels.....	Jacob Perkins.....	London, England...	Nov. 20, 1822
Propelling paddle wheels.....	William F. Kiersing..	New York.....	Dec. 8, 1826
Propelling paddle wheels.....	Wm W. Van Loan...	Cattskill, N. Y....	Mar. 29, 1841
Propelling paddle wheels.....	P. G. Gardiner.....	New York, N. Y....	May 4, 1841
Propelling paddle wheels.....	Jesse Ong.....	N. Huntington, Pa.	May 22, 1837
Propelling paddle wheels.....	Benjamin M. Smith..	Rochester, N. Y....	May 22, 1835
Propelling paddle wheels of canal boats.....			
Propelling paddle wheels, and connecting two vessels.....	Thomas Jackson....	Reading, Pa.....	Jan. 16, 1841
Propelling paddle wheels, floats for boats.....	Benjamin Phillips...	Philadelphia, Pa....	June 13, 1831
Propelling paddle wheels, gearing	Francis W. Stevens..	Chigwell, England..	Sept. 5, 1840
Propelling paddle wheels, horizontal.	B. S. Doxey.....	Baltimore Md.....	Feb. 9, 1821
Propelling paddle wheels, horizontal.	Ephm. Buck, assignee of Peter Lear.....	Boston, Mass.....	Feb. 20, 1844
Propelling paddle wheels, lock canal.....	H. L. B. Lewis.....	Buffalo, N. Y.....	Nov. 2, 1830
Propelling paddle wheels, steam boats.....	Timothy Hunt.....	Boston, Mass.....	Feb. 17, 1832
Propelling paddle wheels, steam boats.....	James P. Espey.....	Philadelphia, Pa....	May 22, 1833

* Antedated Jan. 30, 1841.

INVENTIONS OR DISCOVERIES.	PATENTERS.	REFERENCE.	WHEN MADE.
Propelling paddle wheels, steam boats.....	William A. Douglass..	Albany, N. Y.....	July 31, 1837
Propelling paddle wheels of steam boats*.....	Richard D. Chatterton	Derby, England....	July 24, 1847
Propelling paddle wheels for steam and other boats.....	Mathew W. King...	New York.....	Jan. 15, 1840
Propelling paddles of steam and other boats.....	Samuel Swett, jr....	Chelsea, Mass.....	May 11, 1841
Propelling paddles, steam and water wheels.....	William F. Julian....	Hartsville, Ia.....	June 7, 1841
Propelling paddles, vibrating for boats.....	Peter Lear.....	Boston, Mass.....	Dec. 30, 1841
Propelling polygonal wheel, and chain paddles.....	T. Elmer and A. Pierson	Bridgetown, N. J...	Jan. 21, 1832
Propelling propeller, rotary inclined, for vessels.....	Richard F. Loper....	Philadelphia, Pa....	Feb. 28, 1844
Propelling propeller, submerged..	Peter Von Schmidt..	Washington, D. C..	May 30, 1844
Propelling propeller, submerged, coupling the shafts of, for steam-boats.....	Richard F. Loper....	Philadelphia, Pa....	Oct. 9, 1844
Propelling, rowing machine.....	Ebenezer Bryant....	New London, Conn.	Jan. 13, 1806
Propelling, sculling boats by steam	James Hunt.....	East Chester, N. Y.	Mar. 11, 1812
Propelling, sculling boats by steam	Isaac Silliman.....	Philadelphia, Pa....	Dec. 17, 1812
Propelling ships.....	Anthony Hermange..	Baltimore, Md.....	May 31, 1826
Propelling ships, (on Hermange's and Steenstrup's).....	Anthony Hermange..	Baltimore, Md.....	Nov. 26, 1826
Propelling ships.....	John Ericsson.....	New York.....	Dec. 31, 1844
Propelling ships and other vessels	Daniel Rudd.....	Bozrah, Conn.....	Mar. 23, 1842
Propelling spring, and marine valve	William Willis.....	Charleston, S. C....	May 2, 1826
Propelling steamboats.....	John Sheffield and John Ingraham.....	Erie county, N. Y..	May 17, 1832
Propelling steamboats, canals....	John Elgar.....	Baltimore, Md.....	Nov. 7, 1835
Propelling steamboats.....	James McCurdy.....	Norwich, Ct.....	Sept. 18, 1835
Propelling steamboats, and other vessels.....	William Scarbrough..	Savannah, Ga.....	April 8, 1835
Propelling steamboats and other vessels.....	Isaac Theal.....	New York.....	Dec. 24, 1834
Propelling steamboats and other boats.....	Gabriel H. Moreau...	France.....	Jan. 26, 1844
Propelling steamboats and other vessels.....	Truman Cook.....	New York, N. Y....	May 12, 1842
Propelling steam and other boats	Francis Pettit Smith..	London, England...	Nov. 12, 1841
Propelling and steering boats...	Thomas L. Jones....	New York, N. Y....	July 16, 1842
Propelling vessels.....	Abijah Babcock.....	New York.....	Dec. 2, 1793
Propelling vessels.....	Benjamin Wynkoop..	Philadelphia, Pa....	Sept. 13, 1794
Propelling vessels.....	Charles Stowdinger..	New Jersey.....	June 2, 1799
Propelling vessels.....	John J. Giraud.....	Baltimore, Md.....	Nov. 22, 1820
Propelling vessels.....	Hull Case.....	Norwalk, Ohio.....	Aug. 13, 1826
Propelling vessels.....	Felix Peltier.....	New York.....	Oct. 1, 1830
Propelling vessels.....	John Ericsson.....	Kingdom of Sweden	Feb. 1, 1830
Propelling vessels.....	Daniel Fitzgerald...	New York.....	Oct. 9, 1841
Propelling vessels by animal power	J. P. Durand.....	New York.....	Oct. 3, 1817
Propelling vessels by the buoyancy of air.....	Sylvester W. Hall....	Troy, N. Y.....	Nov. 6, 1842
Propelling vessels in a calm.....	Stephen Rudd.....	New York.....	June 14, 1842
Propelling vessels, cylinder for...	Benjamin Phillips....	Philadelphia, Pa....	Jan. 23, 1830
Propelling vessels, improvement in	Bennet Woodcroft...	Manchester, England	April 4, 1846
Propelling vessels, by means of continuous streams of water...	Robert S. Schuyler...	New York, N. Y....	Mar. 17, 1842
Propelling vessels, paddles, and less chain.....	Beriah Douglass....	Albany, N. Y.....	Sept. 26, 1842
Propelling vessels by paddle power.....	Jon. Carneau.....	New York.....	Aug. 28, 1817

* Date of English patent, Jan. 11, 1838. † Date of Eng. pat., May 31, 1828. ‡ Date of Eng. pat., Feb. 13, 1844

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	DATE ASSIGNED.
Propelling vessels at sea.....	Elizah Bryan.....	New York.....	Dec. 22, 1828
Propelling vessels by screw.....	John J. Giraud.....	Baltimore, Md.....	April 29, 1831
Propelling vessels by steam, horizontal shifting paddle.....	Horace Everett.....	Windsor, Vt.....	June 9, 1843
Propelling vessels, screw propeller.....	Ebenezer Beard.....	New Sharon, Maine.....	April 10, 1841
Propelling wheels for boats.....	William Kelly.....	Pittsburg, Pa.....	July 12, 1834
Propelling wheels for boats.....	William Kelly.....	Pittsburg, Pa.....	Nov. 17, 1834
Propelling wheels for boats.....	Hiram Brown.....	Lebanon, Ohio.....	July 24, 1818
Propelling wheels for boats.....	James Prince.....	New York.....	Oct. 2, 1829
Propelling wheels for boats.....	Benjamin Raymond, jr.....	Beverly, Mass.....	Nov. 13, 1826
Propelling wheel.....	Daniel Deshon, 2d.....	New London, Conn.....	April 4, 1846
Propelling wheels for boats, (on Astum's and Bolton's.....	Phineas Palmeter, jr.,..	Jamestown, N. Y....	April 14, 1831
Propelling wheels for boats.....	Asa Waters.....	Millbury, Mass.....	April 30, 1831
Propelling wheels for boats, by animal power.....	Anthony Olney.....	Canton, Mass.....	Dec. 11, 1817
Propelling wheels for boats, by animal power.....	John S. Trott.....	Boston, Mass.....	June 2, 1818
Propelling wheels for boats, elastic cars.....	Lewis Latour.....	.....	Feb. 16, 1813
Propelling wheels for boats, elbow for.....	Ralph Bulkley.....	New York.....	April 24, 1834
Propelling wheels for canal boats.....	Henry Averill.....	Richland, N. Y.....	Oct. 1, 1830
Propelling wheels for horse boats.....	R. Brown & J. Murphy.....	New York.....	Nov. 18, 1818
Propelling wheels, inside lever for.....	John J. Giraud.....	Baltimore, Md.....	Dec. 1, 1829
Propelling wheels for steam boats.....	John J. Giraud.....	Baltimore, Md.....	Sept. 15, 1826
Propelling wheels for steam boats.....	Robert L. Stevens.....	Hoboken, N. J.....	April 10, 1827
Propelling wheels for steam boats.....	David Hulme.....	Bergen, N. J.....	April 16, 1833
Propelling wheels for steam boats.....	Nehemiah Dodge.....	New York.....	Feb. 25, 1835
Propelling wheel for steam ships, water and wind wheel.....	John Hobday and William J. Cocke.....	Portsmouth, Va....	Mar. 29, 1841
Pumps, ships.—See Class 11.			
Raft.....	William Deane.....	Pittsburg, Pa.....	Nov. 4, 1805
Raft, constructing.....	Henry Babb.....	Westbrook, Maine..	Jan. 13, 1824
Raft, timber.....	Daniel Gordon.....	Chanceford, Pa.....	Feb. 14, 1818
Raft, wreck.....	A. Du Buc Marentille.....	New Jersey.....	Mar. 18, 1803
Raising canal boats for repairing.....	N. R. Penrose and S. F. Palmer.....	Beaver Medow, Pa..	May 11, 1839
Raising ships, &c., out of water. See lifting ships out of water.	John H. Greene.....	Providence, R. I....	May 26, 1828
Raising sunken vessels.....	Theodore R. Timby..	Auburn, N. Y.....	April 21, 1842
Raising sunken vessels, machinery for.....	John Custis.....	Yarmouth, Mass....	Dec. 10, 1841
Raising vessels.....	Thomas R. Gedney..	Washington, D. C..	Aug. 9, 1833
Raising vessels' anchors.....	Benjamin Bruff.....	Rochester, N. Y....	Sept. 13, 1831
Raising vessels.....	Tobias Cook.....	Scituate, Mass.....	June 30, 1836
Raising vessels, and carrying.....	Hiram L. Meeker and J. Bergen.....	Jersey city, N. J., and New York city	May 25, 1838
Raising vessels, and floating.....	Samuel Carson.....	Woodside, England..	July 12, 1836
Raising vessels, by sliding ways.....	Thomas Sheffield....	Green county, N. Y.	May 8, 1830
Raising vessels for repair.....	Benjamin Waterhouse	New York.....	April 15, 1836
Raising vessels, sunken.....	William Atkinson and E. Hale.....	New York.....	Dec. 2, 1835
Raising vessels out of water.....	John T. Morgan.....	New York.....	Oct. 9, 1806
Raising vessels out of water.....	Joshua Cheves.....	Elmyra, N. Y.....	Mar. 5, 1831
Raising vessels out of water.....	Thomas Bell.....	Brookhaven, N. Y..	Nov. 14, 1833
Rapid jack, for ascending rapids.....	Augustus Sacket.....	New York.....	July 3, 1809
Rigging blocks of ships.....	Stephen Waterman and Isaac D. Russell....	Greenwich, Conn. } New York.....	Jan. 31, 1844
Rigging, forming and rigging the sails of square rigged vessels.....	Warren C. Choate....	Washington, D. C..	April 17, 1844
Rigging to mast heads.....	Wm. H. Allen, U.S.N.	Killed by the pirates	April 25, 1822
Rigging, standing, of vessels.....	Benjamin W. Booth..	Washington, D. C..	Sept. 28, 1826
Rigging vessels.....	Isaac Garretson.....	Pennsylvania.....	May 29, 1797

* Additional improvement, September 12, 1838.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Rigging vessels.....	Stephen Sayre.....	Bordentown, N. J..	May 9, 1887
Rigging vessels.....	Samuel Wells.....	Boston, Mass.....	July 24, 1882
Rudders.....	Andrew Watkins.....	Salem, Mass.....	May 21, 1894
Rudders.....	Samuel Kepner.....	Harrisburg, Pa.....	Mar. 4, 1836
Rudders, hanging and securing..	Richard M. Taylor...	New York.....	Feb. 14, 1833
Rudders, hanging.....	John Shaw.....	Philadelphia, Pa....	Mar. 17, 1818
Rudders, side, for steamboats...	John L. Sullivan.....	Boston, Mass.....	Dec. 11, 1818
Sails, measuring, instrument for..	John Dominis.....	Now in the Sand- wich Islands.....	Sept. 30, 1842
Sails of ships, regulating.....	Jos. S. Sampson....	Boston, Mass.....	July 5, 1793
Sails for ships, &c., making and furling.....	John Wade.....	Boston, Mass.....	Dec. 6, 1836
Scows and boats.....	Elisha Sherman.....	Lansingburg, N. Y..	Mar. 2, 1809
Scows, for sand.....	Rufus Eliot.....	Georgetown, D. C..	Feb. 14, 1818
Screw cogs, for sheaves of ship's blocks.....	Rhodes Kingsbury...	Bath, Me.....	May 22, 1830
Sheathing vessels.....	Henry Guest.....	New Jersey.....	Jan. 26, 1801
Ships' anchors.....	N. P. Isaacs and Jas. Raisbech.....	New York.....	July 5, 1845
Ships' cables, relieving.....	Levi Bissell.....	Brooklyn, N. Y....	Feb. 28, 1845
Ships, cellars, &c., mode of calking	William Bennet.....	New York.....	April 20, 1844
Ships, machine for ascertaining the velocity, &c.....	James D. Woodside..	Washington, D. C..	Mar. 17, 1829
Ships' moorings*.....	Alexander Mitchell..	Belfast, Ireland....	April 1, 1845
Ships and other vessels, stengthen- ing the sails off.....	Archibald Trail.....	Great Britain.....	Sept. 24, 1844
Ships, preventing dragging their anchors, &c.....	Russel Evarts.....	Madison, Ct.....	Nov. 25, 1839
Ships, sails for.....	James Maull.....	Philadelphia, Pa....	Dec. 11, 1845
Shrouds, &c., of vessels tightening	David Stackpole.....	Portland, Me.....	Oct. 10, 1834
Signals for vessels.....	Nathaniel Shaler....	New York.....	Feb. 21, 1810
Sounding instruments.....	Henry S. Stellwagen..	United States navy..	Dec. 31, 1842
Sounding instrument, for ascer- taining the depth of water....	Francis B. Ogden and John Ericsson.....	New Jersey & Swe- den.....	July 19, 1837
Staging, swing.....	Elijah Drury.....	Washington, Mass..	Feb. 16, 1829
Steamboat.....	Edward West.....	Kentucky.....	July 6, 1802
Steamboat.....	John Evelett.....	Boston, Mass.....	April 23, 1812
Steamboat.....	Daniel Dodd.....	Mendham, N. J....	Feb. 2, 1814
Steamboat, anti-friction wheels..	Julian Nicolett.....	Pittsburg, Pa.....	June 12, 1835
Steamboats, bail wheel for raising water from the hold of.....	Horace D. Forbes....	New York, N. Y....	May 26, 1843
Steamboat, chain float.....	Michael Morrison....	Boston, Mass.....	Jan. 17, 1811
Steamboat for canals.....	John Elgar.....	Baltimore, Md.....	Nov. 7, 1835
Steamboats, constructing to pre- vent sinking.....	Richard McDonald...	Harrisburg, Pa....	Nov. 10, 1841
Steamboats, constructing and pro- pelling spirally.....	Thomas J. Wells....	New York.....	Dec. 23, 1841
Steamboat and engine.....	D. Large & F. Grice..	Philadelphia, Pa....	Dec. 17, 1812
Steamboat, for passage of rapids..	Thomas Blanchard...	Springfield, Mass..	Mar. 25, 1831
Steamboat, propelling by poles...	Mellen Battle.....	Herkimer, N. Y....	Mar. 27, 1812
Steamboat, for shallow water....	Benjamin Phillips....	New York.....	April 28, 1826
Steamboats, preserving their equi- librium.....	Samuel N. Purse and Martin Staley.....	Ashley, Mo.....	Dec. 31, 1839
Steamboats, preventing from sink- ing.....	Lovel G. Mickles....	New York, N. Y....	April 25, 1843
Steam vessel, constructing and propelling.....	William W. Hunter...	United States navy }	Mar. 12, 1841
Steering apparatus for ships, &c..	Benjamin Harris....	Norfolk, Va..... }	
Steering apparatus for vessels....	Samuel Nicolson.....	Boston, Mass.....	Sept 12, 1837
Steering boats, brace for.....	George W. and E. B. Robinson.....	Boston, Mass.....	Sept. 30, 1842
Steering helm wheel.....	Howard Nichols.....	New Bedford, Mass	Sept. 18, 1841
Steering tiller wheel.....	Robert P. Cunningham	Pomfret, Ct.....	Aug. 3, 1820
	Cornelius Tiers and Joseph Myers.....	Philadelphia, Pa....	Jan. 18, 1830

* Date of foreign patent, July 4, 1833.

† Patented in England, Feb. 24, 1844. ‡ Antedated Nov. 2, 1842.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Steering ships &c.....	Michael Pierson.....	Newburyport, Mass.	April 1, 1822
Steering ships, &c.....	Elijah Soule.....	Duxbury, Mass.....	Nov. 3, 1822
Steering steamboats, apparatus for	Russel Everts.....	Madison, Ct.....	Jan. 5, 1841
Steering vessels.....	John Phillips and Jas. Smallman.....	Philadelphia, Pa....	Sept. 18, 1810
Steering vessels.....	S. and G. Clark and Geo. Stimson.....	Charlestown, Mass.	April 26, 1826
Steering vessels.....	John B. Holmes.....	Boston, Mass.....	April 11, 1834
Steering vessels, apparatus for..	Benjamin F. Adams....	Boston, Mass.....	Nov. 13, 1833
Steering wheel.....	F. Kingsbury and C. Rowse.....	Bath, Me.....	July 10, 1826
Steering wheel.....	John M. Brown.....	Boston, Mass.....	June 24, 1826
Steering wheel, for ships, &c....	Andrew Morse.....	Boston, Mass.....	Dec. 1, 1837
Steering wheel for vessels.....	Phillip T. Share.....	Baltimore, Md.....	Nov. 28, 1842
Steering wheels for vessels, improvement in.	Richard C. Holmes & J. J. Springer.....	Cape May, N. J....	July 20, 1846
Table, sea.....	Wm. H. Richardson..	Baltimore, Md.....	June 9, 1809
Table, for the use of ships.....	George Patrick.....	Wilkesbarre, Pa....	Nov. 8, 1814
Thimbles, ships.....	Barnabas Thatcher...	Yarmouth, Mass....	Mar. 2, 1833
Thimbles, ships.....	Prentiss White.....	Yarmouth, Mass....	July 2, 1836
Tides and currents, representation of.....	Benjamin F. Wat's..	Fort Gaines, Ga....	Sept. 1, 1843
Tides, measuring, and vessel's ways.....	James D. Woodside..	Washington, D. C..	Mar. 17, 1829
Tides, gauge.....	James D. Woodside..	Washington, D. C..	April 14, 1824
Timber, bending, for boat building	John Orbison.....	Piqua, Ohio.....	May 27, 1820
Timber, bending.—See Class 14.			
Timber, hewing, dubbing, and dressing for ships.....	John Judge.....	Washington, D. C..	April 27, 1831
Towboat, steam, and warping windlass.....	John L. Sullivan.....	Boston, Mass.....	April 2, 1814
Towboat, steam.....	John L. Sullivan.....	Boston, Mass.....	Dec. 4, 1816
Towing boats on canals, apparatus for.....	Peter Cooper.....	New York.....	Jan. 24, 1830
Towing boats on canals.....	Samuel Howard.....	Savannah, Ga....	May 24, 1820
Towing boats on canals.....	Edward S. Townsend	Palmyra, N. Y....	Mar. 12, 1823
Tow line, apparatus for holding..	Robert Davis.....	Philadelphia, Pa....	Nov. 11, 1830
Tow line, for boats.....	Aaron Bull.....	Carlisle, Pa.....	Jan. 30, 1830
Tow line, canal boats, of bullocks' hides.....	James Sanford.....	Weston, Ct.....	Feb. 16, 1820
Tree nails, for ships.....	Thomas Rowell.....	Hartford, Vt.....	Dec. 13, 1821
Tree nails, turning.....	J. E. Andrews.....	Boston, Mass.....	Aug. 30, 1832
Truss, cast iron.....	Enos Baldwin.....	New York.....	July 31, 1822
Truss, for hanging ships' yards..	Preserved Fish.....	New York.....	Sept. 24, 1824
Truss, lever, and sling.....	Samuel Wells.....	Boston Mass.....	July 24, 1822
Truss, lever, and sling, for yards of vessels.....	Samuel A. Wells....	Boston Mass.....	Dec. 23, 1824
Truss, for vessels.....	Jonathan T. Quimby..	Belfast, Me.....	Jan. 30, 1832
Ventilating bellows, for ships, &c	Russell Barron.....	Philadelphia, Pa....	Feb. 20, 1835
Ventilating machine.—See Class 11			
Ventilating pump.—See Pump, Class 11.			
Ventilating ships, &c., by machinery.....	Russel Jarvis.....	Boston, Mass.....	Mar. 5, 1834
Ventilating vessels.....	Charles W. Skinner..	Norfolk, Va.....	Aug. 23, 1822
Ventilating vessels, and purifying air in them.....	Jesse Remington.....	Baltimore, Md.....	Mar. 1, 1822
Ventilators, nautical.....	Benjamin Wynkoop..	Philadelphia, Pa....	June 19, 1795
Vessels, ascertaining centre of gravity.....	John Hobday.....	Portsmouth, Va....	Sept. 14, 1843
Vessels, attaching buoys to raise them.....	John Brown.....	Stonnington, Ct....	Sept. 26, 1839
Vessels, attaching keels.....	Thomas F. Griffith..	New Market, Md...	April 26, 1845
Vessels, connecting tiller with the rudder head of.....	Henry Waterman...	Bath, Me.....	May 26, 1843

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Vessels, berth of, constructing...	Harmon King.....	New York.....	Sept. 4, 1841
Vessels, boats, &c., constructing.	Joseph Francis.....	New York.....	Oct. 11, 1841
Vessels, constructing and propelling.....	George Burnham.....	Philadelphia, Pa....	Dec. 10, 1840
Vessels, heaving down.....	Stephen Colver.....	Connecticut.....	Dec. 14, 1798
Vessels, heaving down.....	John Crowninshield..	Salem, Mass.....	Oct. 19, 1827
Vessels, lining, constructed of sheet iron*	Jas. Kerr, Wm. Grant and John Potter...	Pittsburg, Pa.....	May 7, 1842
Vessels, projecting metallic sheathing for.....	E. M. Robinson.....	New Bedford, Mass	Aug. 8, 1837
Vessels, protecting against snags.	William Johnson....	Louisville, Ky.....	May 16, 1834
Vessels, ships, &c., constructing.	George F. Bigelow...	Norfolk, Va.....	Feb. 18, 1840
Vessels, stranded, hauling off....	Thomas Bell.....	Belpport, N. Y.....	Oct. 22, 1840
Vessels, used as life preservers...	John Mackintosh....	New York.....	Nov. 11, 1837
Vessels' yards, trusses for.....	John W. Wilson....	Philadelphia, Pa...	Dec. 20, 1845
Windlass.—See Class 12.			
Windlass, ship's.....	William Carr.....	Bath, Me.....	Feb. 7, 1842
Windlass and capstan, method of working ships.....	William Holmes.....	Baltimore, Md	Mar. 23, 1842
Yards of vessels, slinging.....	Isaac Carver, jr.....	Prospect, Me.....	Dec. 11, 1827
Yards of vessels, suspending....	Samuel A. Wells....	Boston, Mass.....	Jan. 23, 1828

* Reissued Oct. 14, 1842. Additional improvement same date.

CLASS No. VIII.

MATHEMATICAL,

**Philosophical, and Optical Instruments, including Clocks,
Chronometers, &c.**

LIST OF PATENTS.

CLASS VIII.—MATHEMATICAL, *Philosophical, and Optical Instruments, including Clocks, Chronometers, &c.*

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Acoustic drum	Samuel Sawyer	Boston, Mass.	Oct. 24, 1834
Adding machine	Daniel Kohler	Sunbury, Pa.	June 6, 1834
Alarm bell	Benj. E. Freymuth	Philadelphia, Pa.	Dec. 22, 1814
Alarm bell, for time pieces	Robert Wilson	Williamsport, Pa.	July 3, 1832
Alarm bell, self-acting clock	Otis N. Angell	Johnston, R. I.	June 20, 1834
Alarm to clocks and other time pieces	Benjamin Knight	Statesville, R. I.	Sept. 10, 1840
Alarm, fire	Rufus Porter	Billerica, Mass.	Dec. 28, 1840
Alarm, fire*	Josiah Brown, ass'nee of Theo'lus Goodwin	Brentwood, N. H. } Exeter, N. H. }	Jan. 30, 1841
Alarm lock.— <i>See Class 2, Locks.</i>			
Alarm, to protect houses from thieves	Lester E. Denison	Saybrook, Conn.	Oct. 22, 1840
Angle	Benjamin Dearborn ..	Boston, Mass.	April 29, 1808
Area of irregular figures, mode of finding	Thomas Wood	Smithfield, Ohio.	July 22, 1839
Arithmetic, art of teaching	Oliver H. Shaw	Richmond, Va.	April 16, 1831
Astronomical machine	James Swaim	Philadelphia, Pa.	June 29, 1833
Barometer	William R. Hopkins ..	Geneva, N. Y.	Jan. 25, 1841
Calculating machine	George W. Edelman ..	Philadelphia, Pa.	Dec. 22, 1846
Chronometer escapements	Oramel W. Waste	Pittsford, N. Y.	Sept. 24, 1844
Chronometer	Samuel S. Edmonston ..	New York	April 3, 1819
Circumferenter	James McCann	New Market, Va.	Dec. 20, 1837
Clocks	Eli Terry	Connecticut	Nov. 17, 1797
Clocks	Lemuel Curtis	Concord, Mass.	July 12, 1816
Clocks	Simon Willard	Boston, Mass.	Dec. 8, 1819
Clocks	James Henry	Maysville, Ky.	Sept. 13, 1830
Clocks	Joshua Burritt & Wm. P. Burdick	Ithaca, N. Y.	Oct. 25, 1831
Clocks	Harrison G. Dyer	New York	Dec. 6, 1827
Clocks	Aaron D. Crane	Caldwell, N. J.	Mar. 18, 1829
Clocks	James Bogardus	Henrietta, N. Y.	Mar. 2, 1830
Clocks	Abijah Gould	Henrietta, N. Y.	Oct. 1, 1830
Clocks	Jacob D. Custer	Norristown, Pa.	Nov. 20, 1830
Clocks	Rufus Porter	Billerica, Mass.	June 22, 1832
Clocks	James S. Seger	New York	Nov. 27, 1832
Clocks	Samuel Blydenburg & William Beebe	New York	April 26, 1833
Clocks	James S. Seger	New York	May 22, 1833
Clocks	Joseph Ives	Bristol, Conn.	July 1, 1836
Clocks	Aaron D. Crane	Newark, N. J.	Feb. 10, 1841
Clocks	Charles Kirk	Bristol, Conn.	Aug. 26, 1843
Clocks	Eli Terry	Plymouth, Conn.	Aug. 9, 1845
Clocks, astronomical	Thomas Newell	Sheffield, Mass.	July 7, 1809
Clocks, astronomical	Henry Miller	E. Hanover, Pa.	May 5, 1825
Clocks, balance pendulum	James Goodwin and Richard Gaines	Baltimore, Md.	Jan. 22, 1806
Clocks, balance pendulum	Samuel Goodwin	Baltimore, Md.	July 7, 1809
Clock cases	John Ives	Bristol, Conn.	Mar. 21, 1822
Clock frame, design for	N. Batchelor, assignee of H. Biggins	New York, N. Y.	July 10, 1846
Clocks, improvement in	Thomas A. Davies	New York, N. Y.	Aug. 12, 1846

* Antedated July 28, 1840.

† Antedated Dec. 22, 1840.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ASSIGNED.
Clocks, improvement in	John M. Schrock and John G. Fischer	Millersburg, Ohio...	Oct. 3, 1846
Clocks, improvement in	Thomas A. Davies	New York, N. Y. ...	Jan. 15, 1846
Clock machinery	William Dean	Pleasant Valley, N. Y.	Dec. 21, 1821
Clock pendulums	Frederick Kesselmeir	Wooster, Ohio	April 10, 1844
Clocks, propelling power	Joseph Ives	Bristol, Conn.	Feb. 24, 1845
Clock, self-moving, for winding up	Richard Ward	Waterbury, Conn. ...	Nov. 5, 1829
Clocks, self-winding	Evans Casselberry	St. Louis, Mo.	Aug. 2, 1842
Clocks, striking part	Lemuel J. Kilborn	Pennsylvania	Oct. 12, 1809
Clocks, striking part	George Parker	Ithaca, N. Y.	April 7, 1832
Clocks, striking part	James Bogardus	New York	May 18, 1832
Clocks, striking part	Joseph Ives	Hartford co., Conn. ...	April 12, 1833
Clocks, striking part of	Noble Jerome	Bristol, Conn.	June 27, 1839
Clocks, thirty hours, of wooden ..	Eli Terry	Litchfield, Conn. ...	June 12, 1816
Clocks, time part of wooden	James Harrison	Boston, Mass.	Aug. 22, 1814
Clocks and time pieces	Hiram Twiss	Meriden, Conn.	May 13, 1834
Clocks and time pieces*	William Pardee	Albany, N. Y.	Mar. 22, 1835
Clocks and time pieces, propelling, by atmospheric air	Andrew Morse, jr. ...	Bloomfield, Maine. ...	Sept. 18, 1835
Clocks, time, and striking part ..	Ira Ives	Bristol, Conn.	June 24, 1809
Clock, turret or town	Charles F. Johnson	Owego, N. Y.	July 28, 1846
Clocks, wooden	Orsamus R. Fyler	Chelsea, Vt.	June 13, 1831
Clocks, wooden wheel	Eli Terry	Plymouth, Conn. ...	May 26, 1822
Clocks, wooden wheel, thirty hours	Eli Terry	Plymouth, Conn. ...	May 18, 1825
Clocks, wooden wheel, thirty hours	Eli Terry	Plymouth, Conn. ...	Sept. 9, 1825
Clocks, wooden wheel, thirty hours	Eli Terry	Plymouth, Conn. ...	Mar. 4, 1826
Clocks, wooden wheel, thirty hours	Eli Terry	Plymouth, Conn. ...	Mar. 4, 1826
Clocks, wooden wheel, thirty hours	Eli Terry	Plymouth, Conn. ...	July 5, 1826
Coin, apparatus for counting	Philos B. Tyler, ex'r of Rufus Tyler, dec'd	New Orleans, La. ...	Oct. 11, 1841
Compass, and magnetic needle ...	Julius Hanks	Troy, N. Y.	July 22, 1833
Compass, mariner's	William Russell	New Bedford, Mass. ...	Dec. 1, 1809
Compass, mariner's	Jonathan Ball	Buffalo, N. Y.	Mar. 6, 1835
Compass, mariner's, fixing	Lemuel Langley	Gosport, Va.	June 23, 1838
Compass needle, marine, and sur- veying	Moses Smith	New York	June 15, 1830
Compass, quadrant, and protractor	Francis Whiteley	Standardsville, Va. ...	Dec. 6, 1836
Compass, surveying†	William J. Young	Philadelphia, Pa. ...	Jan. 17, 1832
Compass, surveying	Nathan Bassett	Wilmington, Del. ...	June 28, 1836
Compass, surveying	William C. Poole	Lancaster, Pa.	July 31, 1840
Compass, surveying, or circumfe- renter	Samuel R. Miller	Front Royal, Va. ...	Oct. 22, 1835
Compass, surveying, universal ...	Samuel Dew	Romney, Va.	April 13, 1822
Distance, measuring	Rufus Porter	BillERICA, Mass.	June 11, 1836
Dividing machine	Rufus Tyler	Philadelphia, Pa. ...	Oct. 9, 1828
Draughting instruments	James C. Moore	Belmont co., Ohio ...	Dec. 30, 1833
Electrical apparatus	Thomas Brown	Albany, N. Y.	Dec. 20, 1816
Electrical conductor	René L'Angais	Paincourtville, La. ...	Oct. 3, 1846
Electric diaphragms, application of, to measure pressure of liquids.†	Peter Armand Lecomte de Fontaine Moreau	London, Eng.	Aug. 20, 1846
Electrifying machine	Elijah Cole, by Ezekiel Cole, administrator	Richmond, Ohio	July 22, 1843
Electro-magnets, changing the poles	Nelson Walkly	Tuscaloosa, Ala.	June 27, 1838
Electro-magnetism	Thomas Davenport	Brandon, Vt.	Feb. 25, 1837
Electro-magnetism	Solomon Stimpson	New York	Sept. 12, 1838
Electro-magnetic machine	Truman Cook	New York	Aug. 25, 1840
Electro-magnetic telegraph	Samuel F. B. Morse	New York, N. Y. ...	April 11, 1846
Electro-magnetic telegraph, mode of operating	Ezra Cornell	Ithaca, N. Y.	Dec. 20, 1845
Electrophorus	David F. Lanny	Philadelphia, Pa. ...	Aug. 23, 1811
Engine, for dividing scales	Lemuel Hedge	Windsor, Vt.	June 20, 1827
Escapement, for clocks	Orsamus R. Fyler	Bradford, Vt.	Sep. 6, 1833
Escapement, for clocks	James Fulton	Shelby co., Ky.	Dec. 30, 1835
Escapement of watches	John H. Mulford	Albany, N. Y.	Feb. 21, 1842

* Reissued Feb. 25, 1836.

† Reissued Jan. 11, 1834.

‡ Patented in England April 27, 1844.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Extension tables, slides of.....	Charles F. Hobe.....	New York.....	June 22, 1841
Galvanic batteries.....	John Plumbe, jr.....	Boston, Mass.....	Mar. 4, 1843
Galvanic battery, &c.....	Patrick Coad.....	Philadelphia, Pa.....	Mar. 28, 1842
Genealogy, chronology represented by lines.....	Hy. Bostwick.....	New York.....	Aug. 2, 1826
Geography and astronomy, apparatus for teaching.....	Robert Piggott.....	Elkridge Land'g, Md.....	Jan. 17, 1842
Glass lens, improvement in.....	Henry M. Paine.....	N. Oxford, Mass.....	Oct. 3, 1846
Glasses, for spectacles.....	Isaac Schnaltman.....	N. L. Philadelphia, Pa.....	Feb. 20, 1836
Globes.....	Gilbert Vale.....	New York, N. Y.....	Oct. 28, 1843
Globes, artificial.....	William B. Annin.....	Boston, Mass.....	May 4, 1826
Globes, mounting.....	Silas Cornell.....	Rochester, N. Y.....	July 5, 1846
Globe stand, design for.....	Joslin Gilman.....	Boston, Mass.....	May 7, 1845
Goggles for strabismus.—See Class 20.			
Interest, machine for calculating.....	Jehu Hatfield.....	Glenfall, N. Y.....	May 6, 1844
Interest tables, geometrical.....	Gershom Cobb.....	Boston, Mass.....	Sept. 7, 1808
Interest tables, geometrical.....	Gershom Cobb.....	Boston, Mass.....	April 24, 1809
Interest tables, circular.....	Joseph Jelleff.....	Butternuts, N. Y.....	Sept. 8, 1810
Interest tables, improvement on Jelleff's.....	Gilbert D. Lowe.....	Hampfield, Pa.....	Aug. 12, 1815
Keys, watch.....	Josiah S. Davis.....	Providence, R. I.....	April 3, 1827
Level, horizontal, inclined, and plumb.....	A. Girard.....	Mobile, Ala.....	July 2, 1846
Level and plumb.....	Joseph E. Eldred.....	Rochester, N. Y.....	Aug. 25, 1831
Level, pendulum.....	Asahel Munger.....	Oberlin, Ohio.....	Aug. 17, 1835
Lightning conductors.....	Joseph S. Barber.....	Gloucester.....	Mar. 5, 1839
Lightning conductors.....	Justin E. Strong.....	Boston, Mass.....	April 19, 1841
Lightning conductors.....	William A. Orcutt.....	Boston, Mass.....	Oct. 9, 1841
Lightning, protecting vessels from.....	Elisha L. Keen.....	New York.....	June 27, 1832
Lightning rods.....	Elisha Calendar.....	Boston, Mass.....	Oct. 3, 1808
Lightning rods, securing.....	John Brown & George W. Robinson.....	Providence, R. I.....	Sept. 24, 1825
Longimeter.....	Abel Bayrd.....	S. Reading, Pa.....	July 16, 1828
Longitude, finding.....	James Henry.....	Maysville, Ky.....	Sept. 13, 1820
Lotteries.....	J. I. Cohen.....	Baltimore, Md.....	Mar. 3, 1825
Lotteries.....	William Seger.....	Bergen, N. J.....	May 25, 1825
Lotteries.....	J. I. Cohen.....	Baltimore, Md.....	Aug. 28, 1828
Lotteries.....	Jos. Vanneni.....	Washington, D. C.....	Dec. 4, 1815
Lotteries, by arithmetical chances.....	Eliphalet Nott.....	Union College, N. Y.....	Sept. 9, 1825
Lotteries, constructing & drawing.....	Moses Davis.....	Cumberland, Md.....	May 9, 1825
Lotteries, drawing.....	J. Howard and A. Haywood.....	Providence, R. I.....	Nov. 8, 1825
Lotteries, drawing.....	Francis W. Dana.....	Boston, Mass.....	Dec. 28, 1825
Lotteries, drawing.....	William C. Conine.....	Baltimore, Md.....	Nov. 14, 1826
Lotteries, drawing.....	John C. Rives.....	Washington, D. C.....	Dec. 22, 1826
Lotteries, drawing.....	William E. Spalding.....	Brooklyn, Conn.....	Feb. 15, 1828
Lotteries, drawing.....	D. Malcolm.....	New Orleans, La.....	July 30, 1829
Lotteries, instituting and drawing.....	James K. Casey.....	New York.....	Mar. 28, 1831
Lotteries, schemes.....	Jos. Vanneni.....	Philadelphia, Pa.....	Oct. 18, 1823
Lotteries, schemes.....	John W. Togno.....	Philadelphia, Pa.....	May 16, 1823
Lotteries, schemes.....	Edward Grattan.....	Providence, R. I.....	May 16, 1826
Lottery schemes.....	Joseph Vanneni.....	New York.....	July 18, 1840
Magnetic cylinder.....	Samuel Browning.....	Franconia, N. H.....	Oct. 13, 1816
Magnetic cylinder.....	Samuel Browning.....	Franconia, N. H.....	Nov. 25, 1814
Magnetic fire alarm.....	Addison Smith.....	Perrysburg, Ohio.....	July 24, 1846
Magnetic letter printing telegraph.....	Royal E. House.....	New York, N. Y.....	April 18, 1846
Mapping, land instrument.....	James Deneale.....	Dumfries, Va.....	Aug. 3, 1820
Maps, charts, &c., apparatus for exhibition.....	Nathaniel K. Lombard.....	Boston, Mass.....	Oct. 27, 1836
Maps, charts, &c., instruments for delineating.....	Amity Bailey.....	Newberry, S. C.....	Sept. 4, 1840
Measuring heights and distances.....	Benjamin Wilmer.....	Baltimore, Md.....	Aug. 20, 1819
Measuring rod, for packages.....	Daniel Stansbury.....	Laurel Hill.....	Oct. 26, 1818
Odometer.....	James Clarke.....	Powhattan co., Va.....	Nov. 30, 1818

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Odometer	William A. Turner...	Plymouth, N. C....	Nov. 19, 1838
Odometer	Smith Beers	Waterbury, Ct....	Sept. 14, 1839
Pedometer, sea	Bennett Lies	New York	June 30, 1815
Pendulum, balance	Hiram Twiss	Meriden, Ct....	May 13, 1834
Pendulum, scale	Moses L. Morse	Cambridge, Mass...	Feb. 21, 1810
Pendulum, for clocks	Robert Leslie	Philadelphia, Pa...	Jan. 30, 1793
Pendulum, double	Robert Leslie	Philadelphia, Pa...	Jan. 30, 1793
Pendulum, double	Robert Leslie	Philadelphia, Pa...	Jan. 30, 1793
Pendulum, machine	Charles S. Allen	Newark, N. J....	Oct. 13, 1815
Pentagraph and parallel ruler	John J. Hawkins	New Jersey	May 17, 1803
Perambulator	Anthony Gilford	West Point, Mass...	Oct. 27, 1829
Pinions, for clocks	Ira Ives	Bristol, Conn....	Feb. 24, 1812
Pinions, for clocks	Pharris Bronson and Joel Curtis.	Waterbury, Conn. & Cairo, N. Y....	Aug. 22, 1814
Pinions, rolling, and pinion wheels for clocks	Joseph Ives	Hartford co., Conn..	April 12, 1823
Planetarium, heliogeastrum	Theo. Newell	Poultney, Vt....	April 12, 1829
Plates, mode of boring, for clocks, Plumb, balance, and pendulum level	Joel Curtis	Cairo, N. Y....	Aug. 22, 1814
Protracting table	Lemuel Lewis	Newfield, N. Y....	Oct. 3, 1838
Protractor, facilitating	William T. Steiger	Washington, D. C.	Sept. 7, 1838
Protractor, facilitating	Elisha Brown	Seneca co., Ohio...	Aug. 1, 1833
Protractor, perspective	Bass Otis	Philadelphia, Pa...	Mar. 14, 1815
Protractor, rectangular	Nathaniel Goodwin	Hartford, Ct....	Dec. 24, 1823
Protractor, and tablet, geometrical	John Pool, jr.	Easton, Mass....	June 16, 1830
Protractor, universal	Ennion Williams	Philadelphia, Pa...	Jan. 19, 1810
Quadrant, improvement on Spear's	Francis G. Clarke	Portland, Maine...	Feb. 21, 1833
Quadrant	Josiah Arnold	Caledonia, Vt....	April 14, 1810
Quadrant, artificial horizon for	Charles Goulding	Mobile, Ala....	Feb. 24, 1838
Quadrant, astronomical	Matthew C. Graves	Massachusetts	Sept. 3, 1802
Quadrant, gunners	Charles Hammond	Concord, Mass....	May 5, 1807
Quadrant, horizontal wheels	B. F. Adams	Boston, Mass....	Nov. 19, 1833
Quadrant, and sextant	Phineas Spear	Portland, Maine...	Mar. 19, 1830
Quadrant, trigonometrical	James Templeman	South Carolina...	Aug. 17, 1802
Rules, sliding	John P. Smith	New York city	Jan. 10, 1843
Rules or measures for boards, leather, &c.	Charles Ross	Piqua, Ohio	May 17, 1844
Scale, for measuring	Josiah J. Hendryx	Bennington, Vt....	May 29, 1822
Sector, sliding	Gab. H. Thompson	Boston, Mass....	Dec. 4, 1820
Signals, electro-magnetism	Samuel F. B. Morse	New York	June 20, 1840
Signals, railroad alarm	Samuel Nicolson	Suffolk, Mass....	June 26, 1841
Spectacles, constructing	Joseph Richards	New York	Dec. 16, 1833
Spectacles, construction of	Christopher H. Smith	Niagara, N. Y....	Nov. 12, 1841
Spectacles, forming the joint, &c	Thomas Eltonhead	Baltimore, Md....	April 2, 1841
Spectacles, preparing the glasses, &c	Charles H. L. Jackson	New York	April 20, 1839
Spectacles, revolving glasses, &c	Christopher H. Smith	Niagara Falls, N. Y.	June 29, 1839
Spectacles, side glasses	Daniel Thaxter	Hingham, Mass....	June 18, 1839
Spectacles, and single eye glasses	S. Newton	Washington, D. C.	Dec. 22, 1827
Spectacles, spiral spring	Samuel Babcock	Middletown, Conn..	April 3, 1829
Spherometer, for ascertaining relative bearings	Cephas Johnson	Southington, Conn..	Jan. 9, 1838
Spring, for clocks	James S. Ives	Bristol, Conn....	May 23, 1834
Spring, for clocks	Joseph S. Ives	New York city	May 4, 1838
Spring, combined spiral for clocks	Silas B. Terry	Plymouth, Conn...	Nov. 3, 1830
Sun dials	James P. Gardner	Columbia, Pa....	Dec. 5, 1843
Sun dials of cast iron	Heman McCluer	Hamburg, N. Y....	Sept. 17, 1834
Surveying instruments	George D. Varney	Newbury, Mass....	June 24, 1843
Surveying instruments	Benjamin H. Benton	Middleburg, Va....	Dec. 12, 1843
Surveys, instruments for plotting	William J. Card	Lancaster, Pa....	April 16, 1843
Tally, machine for keeping	William A. Tanner	Plymouth, N. C....	July 12, 1822
Telegraphs	Samuel Frew	Elizabeth, Pa....	July 2, 1842
Telegraph.—See Class 9.			
Telegraph, electro-magnetic*	Charles Wheatstone & Wm. F. Cooke	Great Britain	June 10, 1840

* English patent dated June 16, 1837.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Telescope, sub-marine	Sarah P. Mather.....	Brooklyn, N. Y....	April 16, 1845
Theodolite, or compass	James Eames.....	Newry, Maine.....	Feb. 11, 1835
Theodolite	Samuel Stone.....	Long Green, Balt. Md	June 6, 1835
Time-keeper, balance for.....	J. Bliss & F. Creighton	New York.....	Aug. 4, 1845
Time keeper, marine	Isaac Gill.....	Charleston, S. C....	Jan. 15, 1810
Time piece.....	Simon Willard.....	Massachusetts	Feb. 8, 1802
Time piece.....	David F. Lanny.....	New York.....	Mar. 21, 1803
Time piece.....	William Pardie.....	Poughkeepsie, N.Y.	Feb. 20, 1836
Time piece, silent moving	Simeon Joceline	Connecticut.....	Mar. 8, 1800
Trigonometer.....	William Chamberlain.	.....	June 28, 1809
Trigonometer.....	William Belles	Griswold, Conn....	July 17, 1824
True meridian, finding.	William A. Burt.....	Mount Vernon, Mic.	Feb. 25, 1836
Watches	Jacob D. Custer.....	Norristown, Pa	Feb. 4, 1843
Watches, duplex escapement in..	Charles Edw. Jacot des Combes	Baltimore, Md.....	April 30, 1840
Watches, &c., improvement in the construction of the escapement wheel and escapements of	Charles Edward Jacot	New York, N. Y....	July 28, 1846
Wheels, casting, for clocks.....	Lemuel J. Kilborn ...	Pennsylvania	Oct. 13, 1809
Wheels, glass, for clocks.....	John P. Bakewell....	Pittsburgh, Pa.....	Oct. 1, 1830
Wheels, teeth, and pinions	Joel Curtis and Dimon Bradley	Cairo, N. Y	Aug. 22, 1814
Wheels, for wooden clocks.....	Asa Hopkins.....	Litchfield, Conn....	Aug. 22, 1814
Wire, pointing, for clocks.....	Anson Sperry	Waterbury, Conn ..	Aug. 22, 1814
Writing plates, geometrical.....	Samuel Ellis	New Bedford, Mass.	Nov. 29, 1809

CLASS No. IX.

CIVIL ENGINEERING,

**And Architecture, comprising works on Rail and Common
Roads, Bridges, Canals, Wharves, Docks, Rivers,
Wiers, Dams, and other Internal Improve-
ments, Buildings, Roofs, &c.**

LIST OF PATENTS.

CLASS IX.—CIVIL ENGINEERING and Architecture, comprising works on Rail and Common Roads, Bridges, Canals, Wharves, Docks, Rivers, Wiers, Dams, and other Internal Improvements, Buildings, Roofs, &c.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Aqueducts, of water-proof lime*.	John M. Benham....	Bridgewater, N. Y..	Aug. 29, 1837
Auger, mining.....	Joshua Hobart.....	Dubuque, Iowa....	May 23, 1846
Bars, from harbors, rivers, &c., removing.....	James R. Putnam....	New Orleans, La...	May 6, 1841
Blasting rocks.....	Benoni Kinyon.....	Hillsdale, N. Y....	Mar. 15, 1819
Blasting rocks.....	Moses Shaw.....	New York.....	June 3, 1830
Blasting rocks, cartridges for....	John B. Ives.....	Lebanon, Pa.....	July 17, 1836
Blasting rocks, fuse, safety for..	William Lewis.....	New York city....	Oct. 26, 1838
Blinds, Venitian.....	John Hampson.....	New Orleans, La...	Aug. 21, 1841
Blinds, Venitian, raising and lowering.....	John Wier.....	New York.....	Oct. 8, 1840
Blinds, window.....	Alonzo S. Grenville & Thomas John Lewis	Cambridge & Boston, Mass.....	Aug. 9, 1839
Blinds, window, opening & closing	George Butterfield....	Hopkinton, N. H....	Sept. 4, 1840
Blowing rocks.....	John M. Syme.....	Dec. 12, 1816	
Boring earth, auger for.....	George Page.....	Baltimore, Md....	May 3, 1839
Boring earth.....	John R. Failing.....	Canajoharie, N. Y..	June 13, 1837
Boring earth.....	John R. Failing.....	Canajoharie, N. Y..	Aug. 25, 1838
Boring rocks.....	E. Jones & P. White.	Brookfield, Mass...	Dec. 21, 1809
Boring rocks.....	John Sanford.....	Sharon, Ct.....	Dec. 10, 1812
Boring rocks.....	Ephraim Gilbert.....	Rochester, N. Y....	July 22, 1833
Boring rocks.....	Israel Overall.....	Liberty, Tenn.....	Mar. 14, 1838
Boring rocks.....	John W. Post & Calvin Post.....	Washington, D. C..	Feb. 9, 1830
Boring rocks.....	Israel Overall.....	Liberty, Tenn.....	April 23, 1830
Boring rocks.....	Aaron W. Vancleve....	Stonington, Ct.....	Dec. 2, 1835
Boring rocks.....	George C. Doherty....	Cumberland co., Ky	Aug. 29, 1838
Boring rocks, and blasting.....	John W. Post.....	Washington, D. C..	Oct. 4, 1830
Boring rocks under water.....	John B. Aveilhé.....		Aug. 24, 1861
Boring for water.....	Valentine Cook.....		Nov. 1, 1803
Boring for water.....	Levi Disbrow.....	N. Brunswick, N. J.	Mar. 24, 1835
Boring for water.....	Wm. Morris & Jabez Spinks.....	Kenhawa, Va.....	Oct. 22, 1830
Boring for water.....	Levi Disbrow.....	New York.....	Nov. 1, 1830
Breaking stone, & thrashing grain	Wm. H. Bell & Tim. P. Andrews.	Fort'ss Monroe, Va., & Wash'ton, D. C.	July 9, 1830
Breaking stone for turnpikes....	Benj. F. Lodge and E. T. Cox.....	Zanesville, Ohio....	April 13, 1831
Bridges.....	Charles W. Peale.....	Pennsylvania.....	Jan. 21, 1797
Bridges.....	Charles Fowler.....	Pennsylvania.....	Feb. 24, 1797
Bridges.....	John Stickney.....	Massachusetts.....	June 3, 1797
Bridges.....	Timothy Palmer.....	Massachusetts.....	Dec. 17, 1797
Bridges.....	Theodore Burr.....	Massachusetts.....	Feb. 14, 1806
Bridges.....	Thomas Pope.....	New York.....	April 28, 1807
Bridges.....	James Finley.....	Fayette co., Pa.....	June 17, 1808
Bridges.....	John Templeman.....	Georgetown, D. C..	Mar. 6, 1810
Bridges.....	Lewis Wernwag.....	Pennsylvania.....	Mar. 23, 1812
Bridges.....	Benjamin Connor.....	Portsmouth, N. H..	April 23, 1812
Bridges.....	Theodore Burr.....	Burrhaven, Pa.....	April 3, 1817
Bridges.....	Naphtali Bishop.....	Barre, Vt.....	Jan. 11, 1819
Bridges.....	John Bragg.....	Montreal, Canada..	Jan. 4, 1830
Bridges.....	Ithiel Town.....	Fayetteville, N. C.	Jan. 28, 1830

* Retained Oct. 1, 1838.

† Reissued Oct. 28, 1842.—See Hydraulics.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Bridges.....	Wm. Woodmansee...	Kingston, Vt.....	Mar. 6, 1827
Bridges.....	Thomas P. Blakewell.	Pittsburg, Pa.....	May 15, 1827
Bridges.....	Lewis Wernway.....	Jefferson co., Va....	Dec. 22, 1829
Bridges.....	Augustus Canfield....	Patterson, N. J.....	June 29, 1833
Bridges.....	Ithiel Town.....	New York.....	April 3, 1835
Bridges.....	George Law.....	Easton, Pa.....	June 12, 1835
Bridges.....	Richard I. L. Witley...	Lowell, Mass.....	Oct. 14, 1835
Bridges.....	Francis Good.....	New London, Pa....	Nov. 4, 1837
Bridges.....	Nathan Rider.....	Worcester, Mass....	Nov. 26, 1845
Bridges.....	Lowman Gay.....	Chili, N. Y.....	Nov. 4, 1846
Bridges, and other architectural work.....	Joseph J. Deyster....	Philadelphia, Pa....	Feb. 23, 1810
Bridges, balance.....	Jonathan Jessup.....	Yorktown, Pa.....	July 1, 1811
Bridges, building.....	Jonas Snyder.....	Union co., Pa.....	Feb. 3, 1834
Bridges, building.....	Albert Cottrell.....	Newport, R. I.....	Nov. 10, 1841
Bridges, chain, (imp't on Finley's).....	John Templeman.....	Alleghany, Md.....	Aug. 16, 1808
Bridges, construction of.....	Henry Wilton.....	Wrightsville, Pa....	June 24, 1839
Bridges, construction of.....	Earl Trumbull.....	Little Falls, N. Y....	July 10, 1841
Bridges, draw.....	Garner Wilkinson.....	White Creek, N. Y....	May 5, 1827
Bridges, draw, rolling.....	Richard Crosbie.....	Newark, N. J.....	Feb. 17, 1812
Bridges, floating swing.....	John N. Vrooman.....	Danube, N. Y.....	April 15, 1840
Bridges, frame.....	George Tabb.....	Martinsburg, Va....	Feb. 23, 1816
Bridges, frame.....	Stephen H. Long.....	Baltimore, Md.....	Mar. 6, 1830
Bridges, frame.....	George W. Long.....	Fort Jackson, La....	Mar. 10, 1830
Bridges, frame.....	Stephen H. Long.....	U. S. Top. Engineer	Jan. 23, 1836
Bridges, improvement in.....	Horace Childs.....	Henniker, N. H.....	Aug. 12, 1846
Bridges, increasing the effective strength of beams.....	John R. Remington....	Lowndes co., Ala....	May 19, 1843
Bridges, lattice.....	Herman Haupt.....	York, Pa.....	Dec. 27, 1839
Bridge, manner of crossing rivers by means of a moving platform suspended to a.....	Harvey Leach.....	Philadelphia, Pa....	Mar. 4, 1849
Bridges, spiral brace cylinder....	Isaiah Rogers.....	New York.....	Nov. 10, 1841
Bridges, suspension.....	John A. Roebling.....	Pittsburg, Pa.....	Aug. 26, 1846
Bridges, swinging.....	Abner R. Ring.....	Parma, N. Y.....	Nov. 9, 1838
Bridges, timber, improvement in.....	Thomas Hassard.....	New York, N. Y....	Jan. 15, 1846
Bridges, truss frames of.....	William Howe.....	Warren, Mass.....	July 10, 1840
Bridges, truss frames of.....	William Howe.....	Warren, Mass.....	Aug. 3, 1840
Bridges, truss frames of.....	Jehu Price & James T. Phillips.....	Golden, Md.....	Feb. 23, 1841
Bridges, truss frames of.....	Otis W. Pratt.....	Norwich, Ct.....	} April 4, 1844
	Caleb Pratt.....	Boston, Mass.....	
Bridges, truss frames of.....	William Howe.....	Springfield, Mass...	Aug. 28, 1846
Bridges, truss iron.....	Squire Whipple.....	Utica, N. Y.....	April 24, 1841
Bridges, wooden.....	George W. Thayer...	Springfield, Mass...	April 26, 1845
Bridges, wooden, aqueduct for canals.....	Marshal Lewis.....	Chenango, N. Y....	April 12, 1820
Bridges, wooden brace.....	Stephen H. Long.....	United States army.	Nov. 7, 1839
Bridges, wooden frame suspension	Stephen H. Long.....	United States army.	Nov. 7, 1839
Buildings, constructing.....	Lewis Knapp.....	New York.....	June 28, 1836
Buildings, covering.....	Hazard Knowles.....	Colchester, Ct.....	Oct. 10, 1828
Buildings, securing against fire..	Jos. Hadley.....	Morristown, Vt.....	Feb. 3, 1819
Buildings, securing against fire..	Ebenezer Mix.....	Batavia, N. Y.....	Nov. 23, 1832
Buildings for a school room.....	S. W. Taylor & J. W. Martin.....	Lowville, N. Y....	April 16, 1825
Buildings, stores, &c.....	Isaac Knight.....	Baltimore, Md.....	May 23, 1836
Canons, constructing, for founding piers of bridges.....	George Daniels.....	Philadelphia, Pa....	Feb. 28, 1834
Canals, constructing, applying locomotive engines to boats, barges, &c.....	Charles Bonnycastle..	Charlottesville, Pa..	Jan. 21, 1834
Canals, locks.....	Josiah White.....	Philadelphia, Pa....	Oct. 19, 1819
Canals, locks.....	George Bender.....	New York.....	Aug. 26, 1822
Canals, locks†.....	David Wilkinson.....	Cahoes, N. Y.....	May 14, 1836

* Reissued July 20, 1841.

† Additional improvement, April 4, 1836.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	YEAR GRANTED.
Canals, locks, balance for.....	Josiah White.....	Philadelphia, Pa....	May 17, 1828
Canals, locks, gate.....	William Martin.....	Hampton, Windham co., Ct.....	Jan. 15, 1820
Canals, locks, gate.....	Daniel Rogers.....	Little Falls, N. Y....	Jan. 4, 1828
Canals, locks, gate.....	David Wilkinson.....	Cahoes, N. Y.....	Aug. 17, 1835
Canals, locks, gate.....	Valentine Brown.....	Clifton Park, N. Y....	May 14, 1836
Canals, locks, gate.....	Franklin Livingston..	Waterford, N. Y....	April 13, 1838
Canals, locks, gate for.....	Robert English.....	Lagro, Ia.....	July 1, 1841
Canals, locks, gate, paddle for....	Daniel Rogers.....	Little Falls, N. Y....	Mar. 17, 1826
Canals, locks, gate, safety.....	Jacob Van Dorn.....	Glenn, N. Y.....	May 14, 1827
Canals, lock gates, suspending, opening, and closing.....	Henry McCarty.....	Pittsburg, Pa.....	Mar. 16, 1844
Canals, locks, indicator.....	Valentine Brown.....	Clifton Park, N. Y....	May 14, 1836
Canals, locks, preserving timber of	Simeon Guilford.....	Lebanon, Pa.....	July 10, 1826
Canals, locks, saving water in....	Jonas P. Fairlamb.....	Wilmington, Del....	Nov. 27, 1823
Canals, locks, saving water in....	Jac. Dewees.....	Pottsville, Pa.....	Dec. 31, 1832
Canal locks, sliding valves.....	William Lake.....	Richmond, Va.....	June 7, 1839
Canal locks, sluice gate.....	Geo. W. Hildreth.....	New York.....	Mar. 19, 1840
Canal locks, sluice gate*.....	George Heath.....	Little Falls, N. Y....	Dec. 14, 1841
Canal locks, wicket gates for....	William L. Potter....	Clifford Park, N. Y....	Aug. 31, 1839
Canals and mill dams, waste gate, opening and closing.....	Robert Robinson.....	Greece, N. Y.....	Dec. 14, 1841
Canal and railroad combined.....	Samuel S. Walley....	Charlestown, Pa....	Dec. 11, 1845
Canals, transportation on, and rail- roads.....	John Elgar.....	Baltimore, Md.....	Nov. 7, 1835
Cellars, vaults, &c.....	Ezra Ludlow.....	New York.....	Dec. 14, 1824
Cellars, vaults, &c.....	Henry Wallack.....	New York.....	Oct. 24, 1826
Chains and ropes, used on canals and railroads.....	John M. Palisae & S. S. Durfee.....	Hudson, N. Y.....	Feb. 25, 1835
Dams.....	John M. Syme.....	Richmond, Va.....	Feb. 22, 1830
Dams.....	Samuel J. Burr.....	Chambersburg, Pa....	Feb. 28, 1833
Dams, chutes for.....	Amos Addis.....	Washington t'p, Pa....	Oct. 4, 1834
Dams, coffer.....	William Easby.....	Washington, D. C....	Nov. 19, 1833
Dams, coffer, portable.....	S. S. Walley.....	Charlestown, Pa....	Sept. 15, 1846
Dams, river, easy passage of fish.	Patrick Magrath.....	Philadelphia, Pa....	Oct. 10, 1829
Dock, buoyant.....	Maximin Isnard.....	New York.....	June 22, 1826
Dock, carrying and lifting trunk..	James Barron.....	Norfolk, Va.....	Aug. 2, 1826
Dock, dry.....	John Gardiner.....	Washington, D. C....	Dec. 3, 1802
Dock, dry.....	Ralph Bulkley.....	New York.....	Aug. 28, 1821
Dock, dry.....	Christian Bergh.....	New York.....	April 29, 1825
Dock, dry.....	Levi H. Clark & Lewis M. Wise.....	New York.....	Nov. 22, 1825
Dock, dry.....	Alonson Place.....	New York.....	April 1, 1826
Dock, dry.....	Elias Selden.....	Haddam, Ct.....	July 30, 1829
Dock, dry.....	David Brown.....	New York.....	Feb. 11, 1832
Dock, dry.....	J. Houston, A. Hinman & J. Ingraham.....	Buffalo, N. Y.....	June 22, 1836
Dock, dry.....	Charles F. Johnson.....	Tioga, N. Y.....	Mar. 6, 1840
Dock, dry.....	John S. Gilbert.....	New York.....	May 12, 1840
Dock, dry, rotary.....	Joseph Webb.....	New York.....	May 3, 1817
Dock, elevating.....	E. Buck, H. Crehore, R. Gerry, & A. Bayard	Boston, Mass.....	July 11, 1825
Dock, floating, dry.....	William Rhodes.....	New York.....	May 16, 1808
Dock, floating, dry.....	Samuel Rose.....	New York.....	June 15, 1812
Dock, floating, dry†.....	John Adamson.....	Boston, Mass.....	Dec. 13, 1816
Dock, floating, dry.....	Albert Brux.....	Augusta, Ga.....	Nov. 6, 1818
Dock, floating, dry.....	Edward Covenhoven..	Greensburg, N. Y....	Oct. 30, 1821
Dock, floating, dry.....	William R. Lowerie..	New York.....	June 23, 1825
Dock, floating, dry.....	John Floyd.....	Kittery, Me.....	Aug. 17, 1826
Dock, floating, dry.....	Jas. H. Peck, William Thomas, R. Walsh, & J. D. Coulter, as- signees of J. Thomas	St. Louis, Mo.....	Mar. 26, 1834
Dock, floating, dry.....	Jonathan Hawes.....	Cayuga co., N. Y....	April 22, 1835

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Dock, floating, dry.....	Rufus Porter.....	Billerica, Mass.....	Nov. 14, 1835
Dock, floating, dry.....	J. R. Campbell & J. S. Withington.....	Boston, Mass.....	Nov. 28, 1835
Dock, floating, dry.....	James Barron.....	Philadelphia, Pa.....	July 17, 1837
Dock, floating, dry.....	John Thomas.....	New York city.....	Dec. 20, 1837
Dock, floating, dry.....	Joseph T. Martin.....	New York.....	Mar. 19, 1840
Dock, floating, dry.....	John S. Gilbert.....	New York.....	Mar. 25, 1840
Dock, floating, dry.....	William Thomas.....	St. Louis, Mo.....	May 19, 1840
Dock, floating, dry.....	John S. Gilbert.....	New York.....	Sept. 19, 1840
Dock, floating, dry.....	John Thomas.....	New York.....	June 26, 1841
Dock, floating, dry.....	Dan. Dodge & Phineas Burgess.....	New York.....	Oct. 9, 1841
Dock, floating, dry.....	Hugh K. Wagner.....	St. Louis, Mo.....	Nov. 10, 1846
Dock, floating, dry.....	Selah Hill.....	Jersey City, N. J.....	Feb. 1, 1842
Dock, floating, dry.....	John S. Gilbert.....	New York, N. Y.....	July 28, 1842
Dock, floating, dry, basin to be used in connexion with a.	R. Moody and Samuel D. Dakin.....	New York.....	Sept. 17, 1844
Dock, floating, dry, method of working.	Rutherford Moody & Samuel D. Dakin.....	New York, N. Y.....	Nov. 24, 1843
Dock, floating, graving.....	Thomas Cunningham.....	Pittsburg, Pa.....	Oct. 1, 1830
Dock, hydraulic.....	Zebedee Ring.....	New York.....	Feb. 13, 1836
Dock, hydrostatic, suspension ..	Thomas Evans and J. Parsons.....	New York.....	May 13, 1831
Dock, projecting.....	Moses Rogers.....	New York.....	Jan. 7, 1817
Dock, railway.....	John Thomas.....	New York.....	Mar. 24, 1826
Dock, screw.....	John C. Ely.....	New York.....	Jan. 28, 1829
Dock, screw.....	Elisha Turner.....	Rochester, N. Y.....	Oct. 10, 1829
Dock, screw, floating.....	Stephen F. Sunchfield.....	New Orleans, La.....	April 27, 1832
Doors.....	Daniel Williams, jr.....	Colchester, N. Y.....	Oct. 11, 1828
Doors.....	Eastman R. Ball.....	Oswego, N. Y.....	April 5, 1832
Doors, closing.....	Linus Barnwell.....	Berlin, Ct.....	Nov. 25, 1829
Doors, closing.....	Oliver Davidson.....	Ballstown Spa, N. Y.....	Mar. 30, 1835
Doors, drops.....	George Kilburn.....	Walpole, N. H.....	Dec. 31, 1838
Doors, fender.....	William Cole & John Johnson.....	Randolph, Mass.....	Mar. 27, 1829
Doors, fender.....	Samuel Durfee.....	Providence, R. I.....	Oct. 1, 1830
Doors and gates, closing, apparatus for.....	Gardner Barton, jr.....	Waterford, N. Y.....	Sept. 13, 1843
Doors, hanging.....	Edward C. Tilson.....	Thomaston, Me.....	Jan. 9, 1838
Doors, hanging.....	Wm. D. Beason & E. G. Reed, ass'nees of George W. Wilson.....	New Hampshire.....	July 10, 1840
Doors, improvement in bottom parts of, to keep wind and water out.....	Luther Gifford.....	Syracuse, N. Y.....	May 2, 1846
Doors, preventing tightness of.....	Daniel Frazier.....	New York.....	Dec. 12, 1825
Doors, sliding.....	William T. Forsyth.....	Philadelphia, Pa.....	Feb. 12, 1844
Doors, weather strips for.....	A. S. Pelton.....	Clinton, Ct.....	Dec. 16, 1845
Doors and windows, mode of hanging.....	Aaron B. Carpenter.....	New York.....	Sept. 19, 1845
Drag for removing stones from the bottom of lakes.....	Philander Lee.....	Lyme, N. Y.....	Oct. 31, 1839
✓ Dredging machine.....	Wm. P. Brayton and James Hamilton.....	New York, N. Y.....	Jan. 8, 1839
✓ Dredging machine.....	Oliver Allen.....	Norwich, Ct.....	May 8, 1840
✓ Dredging machine.....	William Esby.....	Washington, D. C.....	Aug. 25, 1840
Drilling rocks.....	Isaac M. Singer.....	Lockport, Ill.....	May 16, 1839
Drilling rocks.....	Simon Pettes.....	Schenectady, N. Y.....	July 3, 1840
Drilling or boring rock, drill for.....	Uriah Higgins.....	Boston, Mass.....	May 2, 1843
Drilling stone.....	Jona. Crane.....	Schenectady, N. Y.....	June 13, 1831
Drilling stone.....	William Holdredge.....	Albany, N. Y.....	Nov. 10, 1831
Drilling stone.....	Andrew Turney.....	Reading, Ct.....	Mar. 3, 1836
Earth, hauling from canals.....	Oliver Phelps.....	Lansing, N. Y.....	July 16, 1827
Earth, raising and removing.....	Joseph Platt.....	Albany, N. Y.....	May 4, 1805

* Patented to J. Peck et al., March 27, 1874

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCES.	WHEN MADE.
✓ Earth, raising.....	Cyrus Barnard.....	Lynn, Pa.....	July 14, 1826
✓ Earth, removing.....	Jacob Welch.....	Boston, Mass.....	May 6, 1805
Earth, removing.....	Ichabod L. Skinner & Samuel F. Tooker..	Hartford, Ct.....	Mar. 23, 1820
✓ Earth, removing.....	Orange H. Dibble....	Niagara co., N. Y....	Feb. 20, 1824
Earth, removing.....	Jeremiah Bailey.....	Philadelphia, Pa....	Mar. 21, 1825
Earth, removing.....	William H. Doll.....	Harrisburg, Pa.....	May 29, 1826
Earth, removing.....	Pierson Reading.....	Trenton, N. J.....	June 1, 1826
Earth, removing.....	Shadrack Davis, jr..	N. Dartmouth, Mass	Feb. 22, 1831
Earth, machine for removing...	Jarvis Ring.....	Ogden, N. Y.....	July 1, 1840
✓ Excavating canals.....	Ichabod L. Skinner..	Hartford, Ct.....	May 30, 1820
Excavating canals.....	John Humes.....	Richmond, Va.....	Nov. 10, 1821
Excavating canals.....	Jeremiah Brainard...	Rome, N. Y.....	Feb. 10, 1826
Excavating canals.....	Lot Forrester.....	Ridgefield, Ct.....	May 10, 1826
Excavating canals.....	George Hendricks....	Urbanna, Ohio.....	Aug. 5, 1829
Excavating canals and ditches...	William Graham.....	New Orleans, La....	Sept. 5, 1831
Excavating, cutting trenches for laying pipe.....	Ezra Cornell.....	Ithaca, N. Y.....	Feb. 28, 1844
Excavating ditches.....	Joseph Hanchett.....	Cold Water, Mich..	Feb. 28, 1840
Excavating ditches.....	George W. Cherry....	Washington, D. C..	Mar. 26, 1841
Excavating, ditching, and embanking earth.....	Horace Cleveland....	Fort Wayne, Ia....	Dec. 31, 1842
Excavating, ditching, embanking, and draining prairie lands....	Cromwell K. Bartlett,	Geneee, Ill.....	Mar. 23, 1842
Excavating, ditching, and embanking, scraper for.....	John Branson, jr....	Sangamon co., Ill....	Mar. 18, 1842
Excavating ditches.....	Herrick Aiken.....	Franklin, N. H.....	Feb. 1, 1842
Excavating, ditching, & embank'g	W. Y. Singleton.....	Springfield, Ill.....	May 29, 1846
Excavating, ditching machines*	Edwin Owen.....	Laporte, Ia.....	Sept. 4, 1844
Excavating earth.....	David C. Lockwood..	New Windsor, N. Y	Mar. 31, 1841
✓ Excavating earth, elevating box, wheels for.....	James Rowe.....	Triana, Ala.....	Feb. 15, 1838
Excavating earth, and removing...	James Sawyer.....	New York city.....	Mar. 23, 1838
Excavating earth under water....	Oliver Teal.....	Salina, N. Y.....	Dec. 8, 1829
Excavating, excavator or drag for removing mud, &c., in beds of rivers.....	Dennis Vermillion...	Washington, D. C..	Nov. 9, 1844
Excavating, excavator scoop and dredging machine.....	Joseph Smith.....	Mansfield, Ohio....	Aug. 24, 1844
Excavating and embanking ditches	George Page.....	Keene, N. H.....	Oct. 26, 1838
Excavating, embanking, and ditching.....	Linton Thorn.....	Washington, D. C..	Oct. 10, 1838
Excavating machine.....	Thomas Clayton....	Shelbyville, Ia....	Dec. 1, 1837
✓ Excavating plough.....	James Richmond....	Hudson, N. Y.....	June 28, 1817
Excavating and removing earth...	George W. Cherry....	Washington, D. C..	Jan. 16, 1839
Excavating and removing earth, crane excavator for.....	William S. Otis.....	Philadelphia, Pa....	Feb. 24, 1839 ✓
✓ Excavating and removing earth, scraper for.....	John Scholder.....	Canton, Ohio.....	Sept. 25, 1839 ✓
✓ Excavating and removing earth...	Nathan Currier.....	Methuen, Mass.....	May 29, 1835
Excavating from rivers.....	Sylvanus Russell....	Buffalo, N. Y.....	April 28, 1836
Excavating scraper.....	Dudley Marvin.....	Canandaigua, N. Y..	Sept. 2, 1831 ✓
✓ Excavating, scrapes for repairing roads.....	Samuel G. Sutton....	Yorkshire, N. Y....	May 30, 1844
✓ Excavating scraper, shovel...	Thomas Pierce.....	Hartwick, N. Y.....	Mar. 3, 1825 ✓
Excavating, submarine ploughing.	John Kendrick.....	Newton, Mass.....	June 10, 1818
Excavating earth, machine for...	D. Carmichael and J. C. Osgood.....	Brooklyn, N. Y....	May 30, 1846
Excavator.....	Darius Comstock....	Lockport, N. Y....	Mar. 15, 1825
Excavator.....	Oliver Allen.....	Norwich, Conn.....	May 1, 1845
Excavator, deepening rivers.....	Henry McCarty.....	Pittsburg, Pa.....	April 1, 1845
Excavator, ditching machine.....	Robert Cummings...	Lyma, Ia.....	July 14, 1845
Excavator, ditching and road....	Daniel S. Stafford...	Rochester, Ill.....	July 10, 1845
Excavator, ditching.....	W. C. Bussey.....	Rockgrove, Ill.....	Sept. 3, 1846

* Antedated March 24, 1844.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Excavator, floating	Harvey W. Campbell	Lockport, N. Y.	Jan. 22, 1899
Excavator, floating	Alonson Watson	Pendleton, N. Y.	Jan. 18, 1890
Excavator, floating	William Morrison and George Tomb.....	Jersey Shore, Pa. ...	Aug. 25, 1830
Excavator, inclined plane.....	Dudley Marvin.....	Canandaigua, N. Y. ...	Sept. 2, 1831
Excavator, machine for ditching..	J. R. Remington.....	Lowndes co., Ala. ...	May 28, 1846
Excavator, mud machine.....	Peter Zaccharie.....	Baltimore, Md.	Nov. 24, 1791
Excavator, mud machine.....	Stephen Colver.....	Connecticut.....	Dec. 14, 1798
Excavator, mud machine.....	John Greenleaf.....	Massachusetts.....	July 13, 1802
Excavator, mud machine.....	Mat. Barney.....	Massachusetts.....	May 14, 1803
Excavator, mud machine.....	John Eveleth.....	.....	Feb. 21, 1807
Excavator, mud machine.....	William Shultz.....	Baltimore, Md.	June 16, 1809
Excavator, mud machine.....	John Newman.....	Providence, R. I.	June 27, 1809
Excavator, mud machine.....	James Tucker.....	Baltimore, Md.	Dec. 13, 1816
Excavator, mud machine, floating	Samuel Davis.....	Baltimore, Md.	Jan. 22, 1817
Excavator, mud machine.....	Samuel Davis.....	Baltimore, Md.	Mar. 23, 1818
Excavator, mud machine.....	Charles T. Baker.....	Providence, R. I.	April 12, 1819
Excavator, mud machine.....	John Eveleth.....	Georgetown, D. C. ...	Aug. 9, 1821
Excavator, mud machine.....	J. Watchman & J. Bratt	Baltimore, Md.	Feb. 18, 1825
Excavator, mud machine.....	Samuel Collins.....	New York.....	Sept. 26, 1826
Excavator, mud machine.....	Elisha H. Holmes.....	Norwich, Ct.	Nov. 18, 1826
Excavator, mud machine*.....	John Hart.....	Middletown, Conn. ...	Nov. 20, 1838
Excavator, and self-loading cart..	Manoah Alden and W. T. Boyd.....	Northumberland, Pa.	July 20, 1831
✓ Excavator, scraper, metallic.....	Oliver Teal.....	Salina, N. Y.	Dec. 8, 1839 ✓
✓ Excavator, scraper and shovel, for removing earth.....	Nathan Whiting.....	Chester, Vt.	Mar. 19, 1810
✓ Excavator, scraper, or team shovel	Elisha Case.....	Canton, Conn.	April 23, 1823
✓ Excavator, scraper, or team shovel	Gideon Davis and Jer. Price.....	Georgetown, D. C., Lockport, N. Y. ...	May 12, 1837
Fences.....	Isaac Vanamberg.....	Watertown, N. Y. ...	Dec. 20, 1843
Fences, and nets, of wire.—See Class 2.	Edward Clark.....	Philadelphia, Pa. ...	April 2, 1812
Fora.....	Frederick S. Barnard.	Philadelphia, Pa. ...	Dec. 21, 1839
Houses, portable, constructing...	Isaiah W. P. Lewis.....	Boston, Mass.	May 1, 1845
Hydraulic structures.....	Amon Baker.....	Western, N. Y.	April 10, 1845
Gates, balance and sliding.....	Andrew Hood.....	New York.....	Dec. 16, 1845
Gates and gateways.....	Joseph Musser and Levi B. Gitchel.....	Canton, Ohio.....	Feb. 11, 1832
Gate, purchase, labor saving, rotary.	Jer. Brainard.....	Canaan, N. Y.	April 16, 1810
Gate, turnpike.....	Henry Jordon.....	Lexington, Ky.	Oct. 1, 1830
Gold, digging and procuring.....	Laura Rice, administratrix of James J. Rice, deceased, and Ebenezer Rice.....	Salina, N. Y.	Aug. 15, 1838
Gravel pump, for excavating wells	Stanley Carter.....	Raymond, Mass.	Nov. 25, 1839
Guide boards and sign.....	Robert C. Manners.....	Boston, Mass.	Aug. 13, 1833
Guide posts.....	Gideon Brown.....	New York city.....	Oct. 6, 1837
Inclined planes, ascending and descending of cars and canal boats	James Stimpson.....	Baltimore, Md.	Aug. 23, 1831
Inclined planes, ascending and descending rivers.....	Elisha F. Aldrich.....	New York city.....	Oct. 12, 1837
Inclined planes, ascending and descending upon rail roads.....	John Williams.....	Deerfield, Mass.	Mar. 23, 1804
Inclined planes, for boats on canals	William Bent.....	Philadelphia, Pa. ...	Oct. 25, 1832
Inclined planes, cogwheels for propelling railway and locomotive cars up.....	Ed. Clark.....	New York.....	June 27, 1825
Inclined planes, drawing up vessels	Archibald Tanner.....	Warren, Pa.	April 15, 1825
Inclined planes, double, for canals	R. F. Stevens and L. B. Pitcher.....	Syracuse, N. Y.	Dec. 28, 1846
Inclined planes, improvement in machinery for ascending.	Levi Burnell.....	Elyria, Ohio.	June 26, 1834
Inclined planes for railroads.....	William F. Ketchum..	Buffalo, N. Y.	Mar. 20, 1839
Inclined planes on railroads, ascending and descending.....			

* Antedated May 20, 1838.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Inclined planes on railroads, ascending and descending.....	John Mercer.....	Harrisville, Ohio...	June 21, 1839
Inclined planes on railroads, ascending and descending.....	John Drummond.....	Elizabethtown, N. J.	June 21, 1839
Inclined planes, for raising and lowering boats on canals from one level to another.....	Ephraim Morris.....	Bloomfield t'nep, Pa.	Oct. 13, 1820
Inclined planes, raising canal boats	William Knight.....	Morristown, N. J...	June 5, 1828
Inclined planes, transporting carriages.....	M. Robinson.....	Henrico county, Va.	April 9, 1828
Macadamizing roads, &c., breaking stone for.....	{ Nich. Cooper, jr., and Townsend McConnel William E. Lukens. }	{ Wheeling t'p., O. Short Creek }	June 27, 1840
Marine railway.....	John Rogers.....	Washington, D. C.	June 24, 1822
Marine railway.....	Amasa Miller.....	New London, Conn.	Feb. 8, 1826
Marine railway.....	Richard Ward.....	New York.....	Dec. 28, 1826
Marine railway.....	Jos. Webb.....	New York.....	May 14, 1827
Marine railway.....	John H. Greene.....	Providence, R. I.	May 26, 1828
Marine railway.....	Amasa Miller.....	New London, Conn.	July 7, 1828
Marine railway.....	Daniel Rogers.....	Mobile, Ala.....	April 3, 1829
Marine railway.....	Richard P. Joraleman and Isaac Lockman	Northfield, N. Y....	April 16, 1831
Marine railway.....	John G. Colley.....	Norfolk, Va.....	Sept. 1, 1831
Marine railway.....	Leonard White.....	Norfolk, Va.....	Nov. 15, 1832
Marine railway.....	Wash'gton Van Dusen	Kensington, Philadelphia county, Pa..	April 14, 1835
Marine railway.....	Robert Tindle, administrator of Israel Riffin.....	Baltimore, Md.....	Aug. 30, 1838
Marine railway.....	Andrew Flanagan....	Baltimore, Md.....	Jan. 16, 1843
Marine railway, flexible rack....	Jesse Wood and P. A. Sabbatan.....	New York.....	Oct. 6, 1827
Marine railway, foundation of....	James Ronaldsen and J. L. Neill.....	Philadelphia, Pa....	May 22, 1830
Marine railway, submarine.....	John Thomas.....	New York.....	Nov. 6, 1826
Marsh drainer.....	Jean Blanc.....	New Orleans, La....	July 2, 1836
Mile mark, cast iron.....	William M. Summers	New York.....	Jan. 13, 1825
Mouldings, cutting.....	Samuel Kennedy.....	New York.....	April 10, 1830
Mouldings, sticking, on plank....	John Judge.....	Washington, D. C.	June 13, 1831
Moving rocks.....	Isaac Lazell.....	Massachusetts.....	Mar. 18, 1798
Pavement, cemented, for streets..	John L. Sullivan.....	New York.....	Oct. 20, 1831
Pavement, cemented, for streets..	John L. Sullivan.....	New York.....	Nov. 9, 1831
Paving, blocks of wood.....	James H. Patterson..	New York.....	Jan. 27, 1841
Paving, blocks of wood*	Stephen Carey.....	New Orleans, La....	Feb. 3, 1841
Paving, blocks of wood, prismatic	John Abbott.....	Wilton, N. H.....	Sept. 25, 1841
Pavements, cast iron, for streets..	William D. Terry....	Boston, Mass.....	July 12, 1843
Pipes, metallic, introducing wire into.....	Samuel F. B. Morse..	New York, N. Y....	Oct. 25, 1843
Pile driving, for bridges.....	John Stone.....	Concord, Mass.....	Mar. 10, 1791
Pile driving, progressive, for railroads.....	Smith Cram.....	New York city.....	June 14, 1838
Pile driving machine.....	R. N. Benson.....	New Orleans, La....	Sept. 18, 1841
Pile driving machine, mode of progressing.....	Elijah P. Williams...	Utica, N. Y.....	July 22, 1839
Pipes, aqueduct and conduit.—See Class 11.			
Pipes, inserting branch pipes through the ground without excavating.	Jonathan Ridgway...	New York, N. Y....	July 16, 1842
Privies, constructing.....	Mark M. Duplat.....	Charleston co., S. C.	Mar. 16, 1820
Privies and vaults.....	Thomas Rundle.....	Boston, Mass.....	Sept. 10, 1828
Railroad.....	Charles Williams....	Boston, Mass.....	Nov. 16, 1821
Railroad.....	John Stephens.....	Hoboken, N. J.....	June 8, 1824 ✓
Railroad.....	John Stephens.....	Hoboken, N. J.....	Oct. 23, 1824 ✓
Railroad.....	Edward Cray.....	Boston, Mass.....	Mar. 15, 1825 ✓

* Patented in England, January 29, 1830.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
✓ Railroad	J. Brown and G. W. Robinson.....	Providence, R. I....	June 6, 1826
Railroad	Edward Dunscomb....	New York.....	July 13, 1830
Railroad	Elisha Johnson.....	Rochester, N. Y....	Nov. 19, 1833
Railroad	Elisha Johnson.....	Rochester, N. Y....	Nov. 23, 1835
Railroad	Nathan Read.....	Belfast, Me.....	Mar. 31, 1836
Railroad	Isaac Cooper.....	Johnstown, Pa.....	May 22, 1837
Railroads, and carriages.....	Isaac Knight.....	Baltimore, Md.....	June 11, 1829
Railroads, for cars.....	James Wright.....	Columbia, Pa.....	April 17, 1829
Railroads, and cars	Jedediah Richards....	Elbridge, N. Y.....	Mar. 9, 1832
Railroads, and cars to turn in and out.....	James Wright.....	Columbia, Pa.....	June 11, 1829
Railroad, chairs of, &c.....	Moncure Robinson....	Philadelphia, Pa....	Mar. 16, 1839
Railroad, chairs of.....	Britton M. Evans....	Lancaster, Pa.....	Dec. 27, 1839
Railroad, chairs of.....	William Dripps.....	Coatesville, Pa....	April 8, 1840
Railroad, cleaning the rails, &c.....	Thomas S. Ridgway....	Pottsville, Pa.....	Oct. 31, 1839
Railroad, cleaning the tracks....	John N. Dennison & Elias Kirkpatrick....	Plainfield, N. J....	July 29, 1839
Railroad, cleaning the tracks....	Wm. & Jas. Thorn, jr.	Plainfield, N. J....	Jan. 29, 1840
Railroad, cleaning the tracks....	Joseph H. Moore....	Wooster, Mass....	Oct. 31, 1840
	Benjamin Woodworth	Boston, Mass....	
Railroad, cleaning the tracks*....	Charles Lombaert....	Philadelphia, Pa....	Mar. 31, 1840
Railroad, connecting cast iron rail for.....	James M. Bay.....	Harrisburg, Pa.....	April 13, 1844
Railroad, construction of.....	James Stimpson.....	Baltimore, Md.....	July 26, 1839
Railroad, construction of.....	James Herron.....	Baltimore, Md.....	April 18, 1840
Railroad, construction of.....	William Russel.....	New York.....	May 8, 1840
Railroad, construction and power of, applying to propel carriages thereon.....	John Rangeley.....	Camberwell, Eng....	Dec. 28, 1840
Railroad curves, construction of.....	Roswell Bourne.....	Lancaster, Mass....	Oct. 10, 1835
Railroad, edge rail and chair.....	William B. Mitchell....	Philadelphia, Pa....	Feb. 27, 1833
Railroad, forest.....	Henry Pinkers and T. R. Williams.....	London, England....	April 27, 1826
Railroad, frog.....	George S. Griggs....	Roxbury, Mass....	July 31, 1837
Railroad gate.....	David Percival.....	Middletown, Del....	April 4, 1846
Railroad, key for fastening the rails of, to their chairs.....	Benjamin Butterfield..	Kensington, Pa....	Aug. 21, 1844
Railroad and locomotive engine— <i>See Steam Engine, Class 6.</i>			
Railroad, with lift of sixteen feet..	Ethan Baldwin.....	Harrisburg, Pa....	May 6, 1826
Railroad planes, revolving, for crossing.....	Jonas P. Fairlamb....	Newcastle, Del....	July 7, 1830
Railroad plates.....	James Stimpson.....	Baltimore, Md.....	Aug. 23, 1831
Railroad plates, joining.....	A. M. McCaine.....	Montgomery, Ala....	Mar. 31, 1836
Railroad platform, revolving....	John Elgar.....	Philadelphia, Pa....	April 12, 1833
Railroad platform, revolving....	John Tustin.....	Philadelphia, Pa....	Sep. 9, 1835
Railroad, preventing cattle on.....	David Green.....	Greenfield, N. Y....	Aug. 25, 1838
Railroad, preventing turning....	David Evans.....	Penn Township....	Nov. 26, 1835
Railroad, rails for.....	John Ruggles.....	Thomastown, Me....	May 22, 1837
Railroad, rails constructing and fastening.....	Peter Henry Dreyer....	New York.....	Oct. 18, 1837
Railroad, road stops for.....	Thomas J. West.....	Whitehall, Va.....	Mar. 11, 1837
Railroad, running gear for.....	George W. Cleaveland	Baltimore, Md.....	Oct. 14, 1835
Railroad, and safety car.....	Alexander McGrew....	Cincinnati, Ohio....	June 13, 1831
Railroads, safety switch for.....	Gustavus A. Nicholls..	Reading, Pa.....	Dec. 19, 1844
Railroad scrapers.....	H. Naglee & Thomas Raney.....	Philadelphia, Pa....	Dec. 30, 1841
Railroad, self-adjusting.....	W. T. James.....	New York.....	Oct. 27, 1836
Railroad, self-adjusting and street car.....	John Pollock.....	Hopewell, Pa.....	July 7, 1830
Railroad, single.....	Henry Sargent.....	Boston, Mass....	May 6, 1825
Railroad, single.....	Uri Emmons.....	Freehold, N. I.....	April 17, 1837

* Antedated Jan. 15, 1840. † Antedated May 3, 1840.

‡ Renewed by act of Congress, seven years from Aug. 23, 1845. Reissued Sept. 26, '35, and Aug. 27, '46.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Railroad, switches, opening and shutting.....	James Stimpson.....	Baltimore, Md.....	Aug. 23, 1831
Railroad, switches.....	William Howard.....	Baltimore, Md.....	Aug. 2, 1832
Railroad, switches for.....	Nathaniel Eaton.....	Worcester, Mass.....	Sep. 3, 1840
Railroad, switches for, self-adjusting.....	John C. Past.....	Morrisville, Pa.....	Aug. 21, 1839
Railroad, switches for, shifting.....	Richard W. Sheckells	Baltimore, Md.....	Oct. 22, 1840
Railroad, switches for, shifting..	Jesse La Rue.....	Bristol, Pa.....	Nov. 10, 1840
Railroad, switch.....	Philos B. Tyler.....	New Orleans, La.....	May 9, 1846
Railroad, timber.....	James Stimpson.....	Baltimore, Md.....	Feb. 16, 1830
Railroad, timber.....	James Stimpson.....	Baltimore, Md.....	Aug. 13, 1833
Railroad, tracks.....	Benjamin H. Latrobe.....	Baltimore, Md.....	Oct. 8, 1840
Railroad tracks for cars to turn short curves.....	Henry M. Naglee.....	Philadelphia, Pa.....	Aug. 22, 1840
Railroad truck-frames.....	Davenport & Bridges, assignees of Charles Davenport.....	Cambridgeport, Mass	Aug. 10, 1844
Railroad, turning short curves...	James Stimpson.....	Baltimore, Md.....	Aug. 30, 1831
Railroad, turning short curves*..	James Stimpson.....	Baltimore, Md.....	Aug. 23, 1831
Railroad, turn about for.....	Jeremiah Myers.....	Attleborough, Mass.....	May 8, 1837
Railroad, turn out.....	John Talbot.....	Portsmouth, Va.....	Oct. 11, 1836
Railroad, and wheels.....	Edward C. Hyde.....	Natchez, Miss.....	Dec. 3, 1834
Railway, portable, endless.....	Jer. Price.....	New York.....	Sept. 15, 1836 ✓
Railway bars, and mode of fastening.....	Edward Tilghman.....	Philadelphia, Pa.....	Dec. 5, 1839
Railway, pneumatic, valves for..	Samuel Clegg and Jacob Samuda.....	England.....	Dec. 31, 1840
Raising canal boats.....	Elisha Turner.....	Rochester, N. Y.....	Dec. 18, 1825
Raising canal boats.....	Elisha Turner.....	Rochester, N. Y.....	Dec. 31, 1825
Raising canal boats.....	Seth C. Jones.....	Rochester, N. Y.....	June 16, 1826
Raising canal boats, and lowering	William Wiard.....	Avon, N. Y.....	May 1, 1828
Raising canal boats, ships.....	William W. Smith.....	Rochester, N. Y.....	Feb. 23, 1830
Raising canal boats and vessels..	Alfred Warner.....	Rochester, N. Y.....	Nov. 16, 1826
Raising canal boats and vessels..	Sylvester Doolittle.....	Rochester, N. Y.....	Oct. 25, 1825
Raising wrecks of vessels.....	Phineas Bennet.....	New York.....	Sept. 2, 1845
Rapids, and shallow rivers, making navigable.....	John Stephens.....	Hoboken, N. J.....	June 8, 1824
Removing obstructions under water.....	Smith Cram.....	New York city.....	Oct. 26, 1838
Roads, constructing.....	John S. Williams.....	Hamilton county, O.....	June 29, 1833
Roads, constructing.....	John Hartman.....	Scottsville, Va.....	June 29, 1833
Roads, constructing.....	Thomas Earle.....	Burlington, N. J.....	Oct. 14, 1835
Roads, constructing.....	John S. Williams.....	Fulton, Ohio.....	July 1, 1836
Roads, constructing with cement	Joseph Robey, jr.....	Albany, N. Y.....	Aug. 17, 1835
Roads, roller, and wheel, and carriages for.....	John Gardiner.....	Washington, D. C.....	Mar. 16, 1829
Roads, streets, &c., cleaning...	John Tucker.....	New York.....	Nov. 10, 1819
Roads, streets, &c., of composition	John Martineau.....	Elbridge, N. Y.....	Aug. 11, 1834
Rocks, machine for drilling.....	Hiram H. Scoville, assignee of Wm. Avery	Chicago, Ill.....	Sept. 9, 1845
Rock and earth boring apparatus	T. S. Speakman & R. A. Stratton.....	Philadelphia, Pa.....	Sept. 17, 1845
Roofs, flat, for houses.....	Henry Johnson.....	Baltimore, Md.....	May 10, 1802
Roofs of houses, &c., manner of making†.....	John Wooley.....	Springfield, Mass...	Mar. 26, 1844
Roofs.....	Nathaniel Adams.....	Marlborough, N. Y.....	July 29, 1829
Roofs.....	Peter U. Ware.....	Albemarle Va.....	Nov. 11, 1830
Roofs, covering with metal.....	Peter Naylor.....	New York, N. Y.....	Sept. 11, 1839
Roofs, covering with oiled cloth..	Hazard Knowles.....	Colchester, Ct.....	Oct. 10, 1828
Roofs, covering with sheet iron...	Charles Bonnycastle.....	Charlottesville, Va.....	June 29, 1833
Roofs, covering with tin.....	Richard S. Tilden.....	Lynchburg, Va.....	Sept. 10, 1829
Roofs, covering with tin.....	Andrew Gandois and J. Swales.....	Petersburg, Va.....	Jan. 5, 1833
Roofs, covering with tin.....	John Bouis.....	Baltimore, Md.....	June 26, 1835

* Renewed by act of Congress seven years from August 23, 1845. † Antedated March 16, 1844.

INVENTIONS OR DISCOVERIES.	PATENTED.	REFERENCE.	DATE ISSUED.
Roofs, covering with tin.....	Charles Bonnycastle..	Leesburg, Va.....	Aug. 17, 1835
Roofs, covering with tin.....	Phineas Burgess.....	Brooklyn, N. Y....	Oct. 17, 1835
Roofs, covering with tin.....	John B. Duval.....	Charleston, S. C....	Sept. 19, 1838
Roofs, fire proof and water tight.	John Henson.....	Lexington, Va.....	Feb. 23, 1839
Roofs of houses, &c., securing tin plate, &c., on.....	Peter Naylor.....	New York, N. Y....	April 25, 1844
Roofs, metal, supporting.....	Peter Naylor.....	New York, N. Y....	June 12, 1849
Roofs, metallic, rendering water tight.....	John W. Boech.....	Charleston, S. C....	Nov. 12, 1842
Roofs, shingling.....	Thomas Young.....	Philadelphia, Pa....	May 11, 1807
Roofing houses.....	William Docker.....	New Orleans, La....	Dec. 10, 1849
Roofing, cast iron.....	William Beach.....	Philadelphia, Pa....	April 23, 1842
Roofing houses, machinery for bending metal plates.....	John Iggett.....	Albany, N. Y.....	July 15, 1843
Roofing houses, constructing of metal.....	John G. Woodin.....	Cincinnati, Ohio....	July 8, 1843
Rut shears, for repairing and improving roads.....	Samuel Mallory.....	Alexander, N. Y....	July 26, 1843
Sewer, common mouthed.....	Alexander Ramsey...	Philadelphia, Pa....	Oct. 3, 1829
Sewer, of hydraulic cement.....	Obadiah Parker.....	New York city.....	July 2, 1836
Stairs, for bridges or ferries.....	David Dunham.....	New York.....	June 23, 1814
Stairs, circular.....	Edward B. Smith.....	Buffalo, N. Y.....	Nov. 15, 1832
Snags, removing.....	Henry M. Shreve.....	St. Louis, Mo.....	Sept. 12, 1838
Snags, sawing or cutting.....	James Hamilton.....	New York.....	June 27, 1839
Stair casings in buildings, arranging.....	William P. Gibbs.....	Boston, Mass.....	June 14, 1843
Stone eradicator.....	John C. Blauvelt.....	Newton, Ct.....	Mar. 2, 1835
Streets, machine for sweeping....	Alexander M. Wilson	Rossville, N. Y....	Oct. 16, 1844
Streets and roads, grading.....	Randal Fish.....	New York.....	Nov. 9, 1839
Streets, sweeping.....	Pliny Robinson.....	Leonardsville, N. Y.	July 30, 1843
Streets, sweeping.....	Alexander Jones.....	New York, N. Y....	July 28, 1843
Streets, sweeping*.....	Thomas Mussey.....	New London, Ct....	Oct. 12, 1843
Streets, sweeping and cleaning†.	Joseph Whitworth.....	Manchester, Eng....	June 1, 1843
Stumps, extracting.....	Alexander Craig.....	New Hampshire.....	April 15, 1807
Stumps, extracting.....	David Stone.....	Clermont, N. H....	July 27, 1809
Stumps, extracting.....	Abieza H. Whitney.....	Bowdoinham, Me....	Mar. 15, 1806
Stumps, extracting.....	Abijah Pratt.....	Jackson, N. Y....	Aug. 17, 1827
Stumps, extracting.....	Abijah Gorham.....	Turner, Maine.....	Jan. 7, 1831
Stumps, extracting.....	Willard Foster.....	Owego, N. Y.....	April 22, 1831
Stumps, extracting.....	Elias Fraser.....	Hector, N. Y....	Dec. 31, 1833
Stumps, extracting.....	Henry Gordon.....	Fountain Dale, Pa..	Jan. 16, 1835
Stump extracting.....	Benjamin Burling.....	Catherine, N. Y....	June 25, 1839
Stump extracting.....	John D. Akin.....	Columbus, Pa.....	Feb. 26, 1849
Stump extracting.....	Miles C. Mix.....	Tompkins co., N. Y.	Mar. 31, 1849
Stump extracting.....	Frederick A. Steuart.	Catherine, N. Y....	April 30, 1849
Stump extracting.....	Lewis & Chs. Howard	Reading, N. Y....	Sept. 14, 1849
Stump extracting.....	Eleazer Marble.....	Wyalusing, Pa.....	Dec. 14, 1849
Stump extracting.....	{ Belden B. Mason.....	{ Randolph..... } N. Y.	{ Feb. 10, 1841
	{ Matthews Joslyn.....	{ Napoli..... }	
Stump extracting.....	Luke F. Cavanaugh..	New Field, N. Y....	May 15, 1841
Stumps, extracting, and moving heavy bodies.....	Roswell H. Hall.....	Branchport, N. Y....	Sept. 15, 1838
Stumps, extracting, and removing houses.....	John E. Larkin.....	Salem, N. Y.....	Oct. 25, 1832
Stumps and rock, extracting....	Leonard Norcross.....	Dixfield, Maine.....	June 15, 1835
Submarine passage.....	John Staples, jr.....	New York.....	Mar. 18, 1891
Surveying hydrographic, art of..	H. Anvil Norris.....	New York.....	June 27, 1849
Telegraph.....	John Grout, jr.....	Massachusetts.....	Oct. 24, 1809
Telegraph.....	William Shultz.....	Baltimore, Md.....	June 14, 1849
Telegraph.....	James L. Elford.....	Charleston, S. C....	June 18, 1832
Telegraph, domestic.....	Daniel Pierson.....	Boston, Mass.....	Mar. 2, 1822
Telegraph, signal.....	Henry J. Rogers.....	Baltimore, Md.....	Sept. 27, 1844
Timber, uniting, for docks.....	William Amesley.....	Albany, N. Y.....	Nov. 6, 1839
Trees, tearing up.....	Salmon Gray.....	St. Lawrence co., N. Y.	July 15, 1818

* Antedated June 17, 1843. † Date of English patent August 2, 1842.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Tunnelling rivers.....	J.B.Bucklin&J.Jacobs Class 15.	West Troy, N. Y..	June 11, 1836
Tubes, clay, for aqueducts.—See			
Vaults.....	Ezra Ludlow.....	New York.....	Dec. 14, 1824
Vaults.....	Henry Hallock.....	New York.....	Oct. 24, 1826
Walls and ceilings, protecting from			
fire.....	Peter Naylor.....	New York.....	Feb. 22, 1839
Walls, building, in deep water...	Henry K. May.....	Boston, Mass.....	Sept. 23, 1833
Water, mode of obtaining.....	Timothy Davis.....	Lawrence to'n'p, Ind	April 14, 1838
Weather strip.....	Alex. Kirkpatrick....	Newark, N. J.....	Dec. 14, 1840
Wells, artesian, boring, uniting an			
auger to the sinking for boring.	William Morris.....	Kanawha co., Va....	Sept. 4, 1841
Wells, curb or case for.....	Job Copperthwaite, sr.		April 13, 1809
Wells, sinking.....	Peleg Easton.....	Nantucket, Mass....	Feb. 1, 1810
Wells, sinking.....	E. Hilyard.....	Philadelphia, Pa....	Sept. 10, 1817
Wells, sinking.....	Tobias Rufiner.....	Kenawha, Va.....	Dec. 22, 1818
Wells, sinking, apparatus for....	Ebenezer Rice.....	New York.....	Nov. 26, 1840
Wharves, constructing.....	James Butler.....	Baltimore, Md.....	Sept. 9, 1813
Wharves, floating, for catching fish	A. Bailey.....	Havre-de-Grace, Md	June 24, 1820
Wharves, piers, &c., constructing	John G. Pray.....	Brooklyn, N. Y....	Jan. 6, 1836
Wier, for catching fish.....	Hawley Emerson.....	Hancock.....	Aug. 14, 1811
Window blinds.....	George Munger.....	Cambridge, Md....	Mar. 20, 1817
Window blinds.....	John Parkerson.....	Boston, Mass.....	Oct. 11, 1828
Window blinds.....	Nathan Palmer.....	New York.....	June 13, 1831
Window blinds.....	Garner Wilkinson....	White Creek, N. Y.	Jan. 8, 1842
Window blinds, opening and shut-			
ting.....	Edwin Keith.....	Bridgewater, Mass..	Jan. 25, 1833
Window and door blinds.....	Sevil Steere.....	Gloucester, R. I....	Mar. 25, 1835
Window and door frames.....	John Jordan.....	Rockbridge co., Va.	April 30, 1817
Window and other frames, cover-			
ing with wove wire.....	James Sellers.....	Philadelphia, Pa....	Feb. 18, 1834
Window fastener.—See Class 2.			
Window frieze and covering.....	Williams Woolley....	New York.....	Aug. 13, 1833
Window frieze and covering.....	Williams Woolley....	New York.....	July 1, 1836
Windows, improvement in.....	James Ogden and D.R.		
	Hart.....	Troy, N. Y.....	Mar. 21, 1846
Window sash.....	Stephen Parsons.....	Massachusetts.....	Nov. 20, 1797
Window sash.....	John Hoover.....	New York.....	Nov. 19, 1804
Window sash.....	Joel Farnham.....	Oswego, N. Y.....	Jan. 7, 1809
Window sash.....	Jer. Bliss.....	Somerset, Conn....	June 17, 1817
Window sash.....	Amos Miner.....	Elbridge, N. Y.....	July 9, 1823
Window sash.....	Charles Thompson....	Poughkeepsie, N. Y.	Dec. 6, 1830
Window sash.....	Amos Miner.....	Elbridge, N. Y.....	Nov. 19, 1833
Window sash.....	Joseph Ingham.....	Wyalusing, Pa.....	Jan. 29, 1834
Window sash.....	Jedediah Richards, jr.	Elbridge, N. Y.....	Nov. 12, 1836
Window sash.....	C. J. Shirrer and T.W.		
	Cross.....	Boston, Mass.....	Mar. 21, 1845
Window sash, blinds, and pannel			
work.....	John Tichenor.....	Ithaca, N. Y.....	Mar. 25, 1833
Window sash, hanging.....	William W. Hopkins..	Norfolk co., Va....	Feb. 24, 1804
Window sash, hanging.....	Francis Follet.....	Petersburg, Pa....	Oct. 15, 1822
Window sash, laying out.....	David Worthington..	Hartford, Conn....	April 27, 1809
Window sash, mortising.....	Orin Ellis.....	Orange, Mass.....	Jan. 16, 1834
Window sash, preparing stuff for.	Caleb B. Rogers.....	Norwich, Conn....	Sept. 20, 1836
Window sash, raising.....	William Long.....	Connecticut.....	Nov. 20, 1800
Window sash, stuff for trying.....	Eben Bassford.....	Livermore, Mass....	April 28, 1810
Window shutter, fire-proof.....	J. Brown and George		
	W. Robinson.....	Providence, R. I....	Mar. 16, 1826
Window shutter.....	Truman Bartholomew	New York.....	June 17, 1809
Window shutters or guards.....	Arthur L. Johnson....	Baltimore, Md.....	April 11, 1842

* Antedated Nov. 20, 1840.

† Reissued Dec. 6, 1830, and Jan. 23, 1834.

CLASS No. X.

LAND CONVEYANCE,

**Comprising Carriages, Cars, and other Vehicles, used on
Roads, and parts thereof.**

LIST OF PATENTS.

CLASS X.—LAND CONVEYANCE, comprising Carriages, Cars, and other Vehicles, used on Roads, and parts thereof.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Alarm, for coaches	Walter Hunt	New York	July 30, 1827
Axle	Dan'l W. Phillips and Wm. Maher	Middlebury, Covin'n Skaneateles, N. Y. . .	April 23, 1828 Dec. 5, 1840
Axles & boxes for carriage wheels Axles for carriages	Asa E. Reynolds . . . Oren Tracy	Fitchburg, Mass. . . .	Dec. 12, 1846
Axles & hubs for carriage wheels.	Henry F. Phillips . . .	Skaneateles, N. Y. . .	Sept. 18, 1841
Axle, moveable	George N. Reynolds . .	Charleston, S. C. . . .	April 29, 1819
Axles of railroad cars	{ Nathaniel Miller and Edward Bancroft . . .	Franklin, Mass. } Providence, R. I. . .	Dec. 15, 1843
Axles of railroad cars, strengthen- ing, &c.	Peter and Wm. C. Al- lison	Philadelphia, Pa. . . .	Nov. 3, 1841
Axles and shafts, oiling horizontal Axle, and thorough boxes, for car- riages	Hiram M. Smith	Richmond, Va.	April 15, 1840
Axletrees and boxes	William Slicer	Baltimore, Md.	July 5, 1837
Axletrees and boxes	Cyrus Beach	Newark, N. J.	June 26, 1807
Axletrees and boxes for carriages and railroad cars.*	James A. Smith	New Haven, Conn. . .	Mar. 23, 1838
Axletrees for carriages	Dexter C. Force and Fred. Davis.	Baltimore, Md.	Nov. 6, 1834
Axletrees for carriages and cars..	Alexander Johnson . .	Newark, N. J.	Feb. 9, 1833
Axletrees, diminishing friction..	Spencer Coleman . . .	Mount Pleasant, Va. .	Mar. 2, 1836
Axletrees, diminishing friction..	Robert Kilborn. . . .	Gr. Barrington, Mass.	April 12, 1808
Axletrees, diminishing friction..	Benjamin Hinkley . . .	Fayette, Kennebec co Maine	April 14, 1836
Axletrees, hub	Rezin Haslap	Baltimore, Md.	Feb. 24, 1831
Axletrees, hub and spokes	Garner Wilkinson . . .	White creek, N. Y. . .	Dec. 6, 1831
Axletrees, machine for greasing..	Fred. Beimler	New York	Aug. 22, 1816
Axletrees, railroad cars, breaking prevented	Joseph S. Kite	Philadelphia, Pa. . . .	July 14, 1834
Axletrees, railroad cars, strengthen- ing of.	Ziba Durkee	Philadelphia, Pa. . . .	Jan. 9, 1838
Axletrees, railway and other car- riages	Ross Winans	Baltimore, Md.	July 20, 1831
Axletrees, reduced friction rollers.	Francis Rees	Clarksville, Ga.	April 14, 1832
Axletree, revolving	Isaac Slack	Avondale, Pa.	Oct. 10, 1846
Axletrees, &c., setting	Timothy Fessenden. .	Boston, Mass.	Sept. 25, 1827
Axletrees, for wagons, &c.	John A. Yeakley . . .	Perry, N. Y.	June 7, 1830
Axletrees and wheels	Aaron Hale	Boston, Mass.	April 2, 1835
Baggage, securing, on post coaches	James Stratler	Greenfield, Mass. . . .	June 18, 1830
Box, spring, open, packed..	William Atchison	New York	May 23, 1815
Boxes, anti-friction, for car axles	Thos. Murray Megget, assignee of William Rowan	New Orleans, La. } Belfast, Ireland. . . }	Oct. 9, 1845
Brakes, arresting the motion of car- riage wheels	Cyrus Walker	Lewisburg, Va.	July 8, 1839
Brakes, friction, for railroad cars, machinery for operating	John L. Clarke	Nashua, N. H.	April 11, 1840
Brakes for car wheels.	William McCammon . .	Albany, N. Y.	Dec. 12, 1846
Brakes for carriage wheels	William Dunning	Dunningsville, Pa. . .	Nov. 1, 1845
Brakes for carriage wheels	David D. Gibson and Walker Cobbs	Danascoville, Ohio. . .	Feb. 12, 1845
Brakes for carriage wheels	Elijah Chapman	Akron, Ohio.	Sept. 26, 1846
Brakes, carriage, self-acting	Samuel Cope	Salem, Ohio	Dec. 22, 1846

*Released to F. Davis, Nov. 24, 1834.

†Date of foreign patent, Nov. 7, 1844.

‡Antedated June 12, 1846.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Brake, carriage, self-acting	Z. C. Robbins	Washington, D. C. .	June 13, 1846
Brakes for carriage wheels, self-acting	John Du Bois, jr.	Cascade, Pa.	June 13, 1846
Brake or lock, for arresting the motion of spring carriages.	Samuel Guse, assignee of Wm. Clayton ...	Marshallton, Pa. ...	June 18, 1842
Brakes of railroad cars, machinery for operating.	John R. Grout	Utica, N. Y.	Aug. 25, 1842
Brakes, self-acting, for inclined planes	Nathan Smith	Waterloo, N. J. ...	Nov. 28, 1842
Brakes, safety, self-acting, for railroad cars.	George S. Griggs	Roxbury, Mass.	Dec. 31, 1839
Brakes, railroad cars.	Petrus J. O. Conway. .	Philadelphia, Pa.	Sept. 10, 1840
Brake for railroad cars.	William Clayton.	Marshallton, Pa.	Aug. 18, 1846
Brakes, railroad car, preventing accidents.	Matthew W. King.	New York.	May 8, 1840
Brakes for retarding carriages.	Moses S. Woodward. .	Marshallton, Pa.	Dec. 4, 1843
Brakes for railroad cars.	Henry C. Sides.	Baltimore, Md.	July 12, 1843
Brake for railroad cars, self-acting	Edwin Thayer	Chatham, N. Y.	Aug. 12, 1846
Brakes, for cars.	John K. Smith	Port Clinton, Pa.	Dec. 2, 1835
Brakes, for cars, eccentric.	Ephraim Morris.	Bloomfield, N. Y.	Sept. 19, 1838
Brakes, wagon, self-regulating ...	Robert Turner.	Ward, Mass.	Aug. 29, 1828
Brakers, cylindrical, for retarding machinery	Smith Cram.	New York.	June 2, 1836
Bumpers, applied to locomotives, &c.	J. P. Fairlamb and L. C. Judson	Philadelphia, Pa.	Jan. 9, 1838
Bumper and draught springs on railroad cars.	Fowler M. Ray	Cattskill, N. Y.	July 29, 1841
Bumpers, in spring draught, for railroad cars.	Peter Alverson	New Haven, Conn. .	Sept. 8, 1838
Car bodies, mode of hanging†.	Levi B. Thyng	Lowell, Mass.	Nov. 18, 1845
Car, circular.	Jonathan Crane.	Schenectady, N. Y. .	Oct. 1, 1830
Car, and circular railroad.	James Rowe	Triana, Ala.	Oct. 28, 1837
Car, door fastening.	John K. Smith	Port Clinton, Pa.	Feb. 12, 1836
Car, for inclined planes, &c.	Sands Olcott.	Harsimus, N. J.	Sept. 11, 1829
Car, locomotive.	William Hestor	Philadelphia, Pa.	Oct. 11, 1830
Car, locomotive, and rails adapted thereto.	Emmor Kimber	Kimberton, Pa.	Mar. 5, 1831
Car, and locomotive engines.—See Class 6.	John C. Blauvelt	Rockland co., N. Y. .	July 11, 1832
Car, rail.	Charles Williams.	Richmond, Va.	Jan. 18, 1820
Car, railroad.	Richard P. Morgan ..	Stockbridge, Mass. .	July 27, 1827
Car, railroad.	Ross Winans.	Vernon, N. J.	Oct. 11, 1828
Car, railroad.	William Howard	Baltimore, Md.	Nov. 22, 1828
Car, railroad †.	Isaac Knight.	Baltimore, Md.	Mar. 18, 1829
Car, railroad.	Hugh Finlay.	Baltimore, Md.	Oct. 27, 1829
Car, railroad.	John J. Reekers	Baltimore, Md.	Dec. 11, 1829
Car, railroad.	John L. Sullivan.	Philadelphia, Pa.	April 6, 1829
Car, railroad.	William P. Orrick.	Reading, Pa.	Mar. 2, 1830
Car, railroad.	Joseph V. Hughes.	Pottsville, Pa.	June 25, 1830
Car, railroad.	John Elgar.	Baltimore, Md.	Oct. 1, 1830
Car, railroad.	William Bryant and Isaac Hiett	Davidson co., Tenn. .	June 13, 1831
Car, railroad.	Isaac Cooper.	Baltimore, Md.	Oct. 25, 1832
Car, railroad.	Samuel Snyder.	Lancaster, Pa.	Nov. 10, 1832
Car, railroad.	Jonas P. Fairlamb ...	Philadelphia, Pa.	Jan. 19, 1833
Car, railroad.	Ross Winans.	Baltimore, Md.	Oct. 1, 1834
Car, railroad.	John Withers.	Bart township, Pa. .	Mar. 25, 1835
Car, railroad.	J. Davis & W. Ashdown	Baltimore, Md.	Mar. 4, 1836
Car, railroad.	Gusta's Plantou, adm'r of Alex'r Plantou ...	Philadelphia, Pa.	June 3, 1837
Car, railroad †.	Sam'l Harrison, jr.	Philadelphia, Pa.	April 24, 1838
Car, railroad.	William A. Davis.	Baltimore, Md.	Oct. 5, 1838
Car, railroad, attaching	L. Pickering and J. Lightner	Boston, Mass.	June 28, 1836

*Additional imp. Oct. 26, 1838.

†Antedated May 17, 1845.

‡Reissued July 19, 1834, and April 30, 1838.

§Additional improvement Nov. 21, 1842.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WEEK ENDED.
Car, railroad, connecting links for	Richard Hemming . . .	Boston, Mass.	Oct. 11, 1845
Cars, railroad, coupling	J. A. Cutting and Geo. Butterfield	Boston, Mass.	Oct. 7, 1846
Car, railroad, cylindrical.	Peter Fleming.	Albany, N. Y.	May 4, 1829
Car, railroad, easing the shock in stopping	Charles Davenport . . .	Cambridge, Mass. . .	Sept. 9, 1835
Car, railroad, frame for	Heinrich Bachman. . .	Lancaster, Pa.	May 2, 1835
Car, railroad, locomotive, coupling bars of.	William D. Chesnut. . .	Wilmington, Del. . .	Feb. 30, 1844
Car, railroad, &c., mode of connecting	Robert Grant.	Philadelphia, Pa. . . .	July 22, 1837
Car, railroad, passenger.	John Stephenson . . .	New York.	April 22, 1833
Car, railroad, pendulous	Samuel T. Jones.	Philadelphia, Pa. . . .	Feb. 22, 1830
Car, railroad, to prevent accidents from what are called "snake heads"	Elisha Tolles.	New York, N. Y. . . .	Feb. 20, 1844
Car, railroad, propelling.	Abm. Pawling.	Philadelphia, Pa. . . .	Mar. 9, 1831
Car, railroad, propelling by horse power	James Simpson	Baltimore, Md.	Feb. 16, 1830
Car, railroad, propelling by horse power	Daniel W. Crocker . . .	Philadelphia, Pa. . . .	Oct. 30, 1834
Cars for removing gravel and earth on railroads	Granville Palmer. . . .	Greenbush, N. Y. . . .	Jan. 16, 1843
Car, railroad, replacing upon track	Samuel H. Bean.	Philadelphia, Pa. . . .	Oct. 11, 1845
Car, railroad, to run on roads and streets	Samuel T. Jones.	Philadelphia, Pa. . . .	Feb. 22, 1836
Car, railroad, running on a single rail.	Charles F. Zimpel . . .	New Orleans, La. . . .	Oct. 15, 1831
Car, railroad, safety.	William Kinkad.	Elkton, Md.	Dec. 29, 1837
Car, railroad, self-adapting	James Wright.	Columbia, Pa.	Sept. 10, 1839
Car, railroad, self-directing	Lewis Wernwag.	Harper's Ferry, Va. . .	Nov. 16, 1831
Car, railroad, self-guiding and accommodating	Levin Clark.	Baltimore, Md.	Sept. 28, 1831
Car, railroad, supporting the bodies	Richard Imlay.	Philadelphia, Pa. . . .	Sept. 21, 1837
Car, railroad, turning curves. . . .	John H. Quail.	Philadelphia, Pa. . . .	Feb. 25, 1844
Car, railroad, turning with facility	Anthony Shermer. . . .	Philadelphia, Pa. . . .	Sept. 9, 1835
Car, railroad, and wagon.	William Howard.	Baltimore, Md.	April 23, 1831
Car, railroad, and wagon.	James Herron.	Richmond, Va.	Mar. 25, 1835
Car, safety.	John Tittle.	Johnstown, Pa.	Feb. 10, 1846
Car, safety, and railroad.—See Class 9.			
Car, self-loading	Isaac Beach	Dryden, N. Y.	June 28, 1830
Car, taking over elevations	Smith Cram.	New York city.	June 11, 1836
Car, and way for moving weights	Thomas Patton, sen. . .	Bowling Green, Ky. . .	Dec. 17, 1834
Carriage	Stephen W. Dana. . . .	Rutland, Vt.	Aug. 30, 1808
Carriage	William Ross.	New York.	Jan. 14, 1809
Carriage	Benjamin Peck.	Philadelphia, Pa. . . .	July 5, 1814
Carriage	Horatio G. Spafford. . .	Albany, N. Y.	Nov. 25, 1814
Carriage	Benjamin Hale.	Newburyport, Mass. . .	Oct. 4, 1817
Carriage	John B. Swann.	Albany, N. Y.	Sept. 29, 1818
Carriage	John B. Swann.	Albany, N. Y.	July 24, 1823
Carriage	Bernard J. Malfasson. .	Burlington, N. J. . . .	April 6, 1824
Carriage	Wm. & Josiah Jessup	Guilford co., N. C. . .	June 1, 1827
Carriage	Theo. Brooks & D. W. Eames.	Rutland, N. Y.	Dec. 6, 1827
Carriage	Thomas Knox.	Sniggersville, Va. . . .	Mar. 15, 1836
Carriage	John T. Kimball. . . .	Kennebunk, Me.	July 22, 1845
Carriage bodies.	Edward Gibson.	New York.	May 10, 1811
Carriage bodies.	Henry Dunlap.	Georgetown, D. C. . . .	Aug. 27, 1812
Carriage bodies.	Jesse Reeder.	Lebanon, Ohio.	Mar. 4, 1826
Carriage bodies, connecting with the perch by means of springs	George Nichols.	Trumbull, Ct.	April 10, 1844
Carriage bodies, hanging.	Azima Vallerchamp. . .	McDowellsville, Pa. . .	Oct. 12, 1839
Carriage bodies, hanging.	Dimon B. Barnum. . . .	New Field, Ct.	Oct. 16, 1839
Carriage bodies, hanging.	Iza W. Brittan.	Medina, Ohio.	Oct. 26, 1839

* Reissued March 14, 1845

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Carriage bodies, hanging.....	John Reynolds.....	Newberry, Pa.....	July 2, 1844
Carriage bodies, hanging.....	Arnold Hosmer.....	Bath, Ohio.....	June 2, 1845
Carriage bodies, and stage.....	Joseph Smith.....	Lancaster, Pa.....	April 29, 1815
Carriage, calash top.....	George Holloway.....	Baltimore, Md.....	Sept. 9, 1835
Carriage, car bodies, hanging....	George S. Hacker.....	Charleston, S. C.....	Jan. 21, 1842
Carriages, construction of.....	John C. Stroebel.....	Pennsylvania.....	Sept. 19, 1835
Carriages, construction of.....	Daniel Neall.....	Milford, Del.....	Feb. 26, 1822
Carriages, construction of.....	Samuel C. Brown and Levi J. Hicks.....	Macedon, N. Y.....	July 17, 1837
Carriages, detaching horses from.	John Madden.....	Warren, Ohio.....	July 9, 1844
Carriages, detaching horses from.	H. C. Wiatt.....	Weldon, N. C.....	Oct. 29, 1846
Carriages, disengaging horses from	William Start.....	Greensborough, Md.	May 3, 1816
Carriages, disengaging horses from	Robert Beale.....	Washington, D. C..	May 12, 1832
Carriages, disengaging horses from	O. R. Broyles.....	Anderson c. h., S.C.	Mar. 17, 1834
Carriages, disengaging horses from	George Kintzi.....	Exeter, Pa.....	May 4, 1842
Carriages, disengaging horses from	Jacob Harlacker.....	Lancaster, Pa.....	Nov. 4, 1842
Carriages, disengaging horses from	David Little.....	Gettysburg, Pa.....	Mar. 30, 1843
Carriages, disengaging horses from	James S. Shnell.....	Shiremanstown, Pa.	April 13, 1844
Carriages, four-wheeled, coupling.	Alfred Osgood.....	Charlestown, Ohio..	Jan. 27, 1843
Carriages, four-wheeled, coupling the forward axle with the reach and head block.....	Alexander H. Hart..	Chagrin Falls, Ohio.	Sept. 23, 1843
Carriages, 4-wheeled, cross cramp	Simeon Glover.....	Newtown, Ct.....	May 4, 1805
Carriages, hand.....	Daniel Nine, jr.....	Reading, Pa.....	May 4, 1813
Carriages, hanging & placing steps	John J. Wells.....	Hartford, Ct.....	Jan. 24, 1815
Carriages, impeding, descending hills.....	Gorham Bunker.....	Truxton, N. Y.....	July 5, 1833
Carriages, land and steam.....	Simon Fairman.....	Nassau, N. Y.....	Mar. 27, 1830
Carriages, locomotive, connecting three or more sets of driving wheels.....	Holmes Hinckley....	Boston, Mass.....	April 1, 1845
Carriages of locomotive steam en- gines.	Wm. Norris, ass'ee of S. Norris and Wm. Knight.....	Philadelphia, Pa....	Feb. 10, 1843
Carriages and machinery, when wheels are used.....	Williams & King....	Hartford, Ct.....	May 16, 1835
Carriages, manual, four-wheeled.	Lyman Cook.....	Whitestown, N. Y..	Mar. 28, 1811
Carriages, measuring distance....	Fuller & Richardson..	Brunswick, Ma.....	May 29, 1835
Carriages, overcome obstructions in roads.....	Hazard Knowles.....	Colchester, Ct.....	Aug. 29, 1833
Carriages, regulating the speed of.	Thomas Blanchard...	Springfield, Mass...	Dec. 28, 1825
Carriages, propelling.....	J. Staples.....	New York.....	April 25, 1794
Carriages, propelling.....	William Ferris.....	Maryland.....	April 29, 1797
Carriages, propelling.....	Milton F. Colburn...	Baltimore, Md.....	April 7, 1829
Carriages, propelling.—See <i>Propel- ling Boats, Class 7.</i>	John A. Whitford....	Saratoga Sp'gs, N. Y	Jan. 20, 1841
Carriages, railroad.....	Albert Bridges & Chs. Davenport.....	Cambridgeport, Mas	May 4, 1841
Carriages, railroad.....	Isaac N. Stanley.....	Philadelphia, Pa....	Mar. 12, 1840
Carriage or car, railroad.....	James Stimpson.....	Baltimore, Md.....	Dec. 10, 1840
Carriages, railroad, connecting & disconnecting.....	Thomas G. Owen....	Baltimore, Md.....	July 1, 1840
Carriage, railroad, coupling irons for.....	Lewis J. Germain....	Catskill, N. Y.....	May 7, 1838
Carriage, railroad, constructing..	Nathaniel J. Wyeth..	Cambridge, Mass...	Dec. 10, 1841
Carriage, railroad, discharging blocks of ice therefrom to plat- forms.....	Nathaniel J. Wyeth..	Cambridge, Mass...	Dec. 10, 1841
Carriages, railroad, machinery for elevating and depositing ice in..	Perry G. Gardiner, as'e of Isaac Bullock....	New York.....	Oct. 11, 1841
Carriages, railroad.—See <i>Steam En- gine, Class 6.</i>	William C. Fuller....	Middlesex co., Eng.	Oct. 24, 1846
Carriages, railway.....			

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCES.	WHERE ISSUED.
Carriages, for removing heavy bodies	Ephraim Bowen	Ledyard, N. Y.	April 9, 1829
Carriages, retarding, descending hills	Ezra Slifer	Boonsborough, Md.	Jan. 16, 1826
Carriages, rolling lever	Harvey Chapman	Corinth, N. Y.	Mar. 24, 1831
Carriages, safety, double axletree	Edward G. Fitch	Blakely, Ala.	Feb. 7, 1829
Carriage shaft, clip for	John Cooper	New York	Jan. 22, 1839
Carriage spring	Starr Fairchild	Trumbull, Ct.	Mar. 14, 1846
Carriages, spring perch for	Stephen Tomlinson	Bridgeport, Ct.	May 16, 1842
Carriages, (sulkies)	John R. Remington	Lowndes co., Ala.	April 4, 1846
Carriages, suspending, pleasure	Joseph Henderson	Guilford, Ct.	Dec. 26, 1808
Carriages, two-wheeled	John Page	New York	Sept. 14, 1840
Carriages, travelling	George H. Richards	New London, Ct.	July 8, 1821
Carriages, wheeled, sust'g weight	Samuel Chapman	Windsor, Mass.	Mar. 2, 1835
Carriage trucks, chain applied to	Jonathan Knowles	Lowell, Mass.	July 28, 1846
Carriage, wagons, couplings for	George W. Hatch	Parkman, Ohio	June 13, 1844
Carriage, whipple-tree for	Benj. Fowler, jr., ass ^e of James Jorey	Hartford, Ct.	June 7, 1840
Carryall	Frederick Shelton	Jackson, N. C.	Dec. 2, 1834
Cart bodies, mode of operating	Thomas Mussey	New London, Ct.	Nov. 1, 1845
Carts, chain and railway, for levelling hills	John H. Morrison	Boscawen, N. H.	Sept. 28, 1813
Carts, self-balanced, hand	George Coolidge	Watertown, Mass.	June 13, 1831
Carts, self-loading	Waldron Beach	Philadelphia, Pa.	Feb. 5, 1826
Carts, removing earth	Jer. Price	Lockport, N. Y.	May 18, 1827
Carts, wagons, &c., loading	Noah Osborn	Fairfield, Ct.	May 23, 1826
Chaise bodies, Grecian	Phineas Dow	Boston, Mass.	Aug. 15, 1810
Coaches	Fred. Bremler	New York	April 24, 1810
Coaches	Fred. Bremler	New York	Jan. 21, 1812
Coaches, accommodation	Benjamin Hale	Newburyport, Mass.	Jan. 17, 1818
Coaches, barouches	John Mead	Albany, N. Y.	Mar. 13, 1817
Coaches, hanging curtains or blinds in	Robert Gedney	New York	April 7, 1832
Coaches, pannels	Peter Harvey	Philadelphia, Pa.	May 9, 1807
Coaches, pest, and other	Eben. A. Lester	Boston, Mass.	Mar. 18, 1835
Coaches, pleasure carriages and railroad cars	Richard Ward	Schenectady, N. Y.	June 2, 1825
Coaches, steam	Thomas Shriver	Cumberland, Md.	Nov. 7, 1839
Gig, fall top	James Semple	Alton, Ill.	May 1, 1845
Inclined planes, mode of ascending and descending by locomotives	John Eberts	Philadelphia, Pa.	Sept. 8, 1815
Journals of railroad cars, constructing the bearings and oil boxes	Ezra Coleman	Philadelphia, Pa.	Dec. 31, 1845
Link, self-separating, for connecting railroad cars	John H. Tims	Newark, N. J.	Oct. 31, 1839
Lock, spring for coach doors	Conrad H. Hunt and Wm. Brown	Fredericksburg, Va.	Dec. 26, 1837
Lock, wagon	Peter Alverson	New Haven, Ct.	April 2, 1838
Lock, wagon	George Divan	Franklin co., Pa.	April 14, 1828
Lock, wagon	John M. Davidson	Brownsville, Pa.	Dec. 31, 1826
Mail carriages, water-proof	Samuel Jones	Bridgeport, Pa.	May 4, 1830
Mail coaches	Bazil B. Pleasants	Brookville, Md.	Dec. 7, 1837
Mail stages	Simeon Draper	Brookfield, Mass.	Aug. 30, 1819
Mode of retarding the runners of sleds in descending inclinations	Daniel W. Eames	Watertown, N. Y.	May 8, 1823
Poles, and lead bars	John Du Bois, jr.	Cascade, Pa.	June 13, 1846
Rails for railroad trucks	Lucius W. Stockton	Uniontown, Pa.	Sept. 29, 1825
Railroads	W. M. C. Cushman	Albany, N. Y.	Jan. 16, 1845
Railway, atmospheric	John Elgar	Brookfield, Mass.	Mar. 12, 1845
Sleds, hold back for	James Filbrow	Tottingham, Eng.	July 26, 1845
Sleds, for transporting ice in blocks	James Andrews	Camden, Maine	Feb. 16, 1837
Sleigh	Nathaniel J. Wyeth	Cambridge, Mass.	Dec. 1, 1840
Sleigh	Aug. Day	Bordentown, N. J.	Jan. 19, 1811
Sleigh	Jac. Fisher	Kennebec, Maine	Dec. 30, 1820

INVENTORS OR DISCOVERERS.	PATENTED.	WHERE ISSUED.	DATE GRANTED.
Sleighs.....	Daniel Carpenter.....	Nelson, N. Y.....	Sept. 20, 1820
Sleighs.....	Moses Miller.....	Fort Ann, N. Y.....	July 28, 1846
Sleighs, connecting the body with the runner.....	Theodore R. Timby..	Auburn, N. Y.....	May 7, 1842
Sleigh runners.....	Abijah Wilder.....	New Hampshire....	Dec. 14, 1799
Sleigh runners, cast iron.....	Nath'l Benedict, jr., Abel Benedict, and Asabel A. Hotchkiss	Sharon, Conn.....	Feb. 10, 1804
Sleigh runner, metallic.....	Araunah Spear.....	Braintree, Vt.....	May 25, 1840
Sleigh runners, to wheel carriages, attaching.....	Henry G. Guyon....	New York city.....	Sept. 13, 1800
Sleigh shoes.....	Seneca Pettee.....	Salisbury, Conn....	Oct. 1, 1803
Sleigh shoes, cast iron.....	Edward Trask.....	Sangerfield, N. Y....	Oct. 6, 1827
Sleigh shoes, cast iron.....	Ichabod Arnold.....	Oswegatchie, N. Y....	Mar. 12, 1800
Sleigh shoes, cast iron, double grooved.....	Lot Brees & Ezra Brees	Luzerne county, Pa..	Feb. 10, 1834
Sleigh shoes, cast iron, on wrought iron rods.....	Sylvanus Tousley....	Manlius, N. Y.....	Feb. 7, 1815
Sleigh shoes, steel plated.....	Sermon Hunt.....	Canaan, Conn.....	Dec. 30, 1813
Sleigh sleds, shoeing.....	William Barton.....	New York.....	Dec. 13, 1830
Sleighs or sleds, mode of locking.	John C. Rickey.....	New Cumberland, O..	July 16, 1842
Sleigh, traverse.....	Levi Rogers.....	Berwick, Mass.....	Feb. 4, 1807
Sleigh, traverse.....	Bela Markham.....	Burlington, Vt.....	July 10, 1804
Splinter bar, and swingle-tress..	Henry Dunlap.....	Gorhamtown, D. C....	April 28, 1807
Spring-brace, for carriages.....	Erastus T. Sprout....	Dimock, Pa.....	Sept. 7, 1804
Springs, carriage.....	R. B. Brown.....	Essex, Vt.....	Dec. 14, 1841
Springs for carriages.....	Jonathan Bacon.....	Bedford, Mass.....	Mar. 9, 1823
Springs, carriage.....	William King and H. Salisbury.....	Hartford, Ct.....	Aug. 29, 1805
Springs, carriage.....	Enoch Ives and Jerry Hill.....	New Haven, Ct.....	June 3, 1800
Springs, carriage.....	Jonathan Mix.....	New Haven, Ct.....	June 17, 1800
Springs, carriage.....	Rd. Humphreys and J. C. Humphreys.....	Cantwell's Bridge, D.	April 22, 1814
Springs, carriage.....	Michael H. Burnwill..	Canterbury, Del.....	Nov. 17, 1833
Springs, carriage.....	George N. Reynolds..	Charleston, S. C....	April 30, 1813
Springs, carriage.....	Lemuel H. Parsons....	Stockbridge, Mass....	June 23, 1804
Springs, carriage.....	Joshua Cone.....	Reading, Conn.....	Aug. 26, 1806
Springs, carriage.....	Henry Pace, sen.....	Cincinnati, Ohio....	Oct. 14, 1835
Springs, carriage.....	Newel Hungerford....	Ithaca, N. Y.....	Mar. 31, 1800
Springs, carriage.....	William Patton.....	Towanda, Pa.....	Jan. 9, 1830
Springs, carriage.....	William Sharp.....	Burdett, N. Y.....	April 7, 1836
Springs, carriage.....	Elbridge G. Woodside	Augusta, Maine.....	May 4, 1836
Springs, carriage.....	George B. Robinson..	Pawlet, Vt.....	Oct. 3, 1838
Springs, carriage.....	Remember Baker, ex- ecutor of Stan. Baker	Elba, N. Y.....	June 19, 1836
Springs, carriage, and attaching carriage bodies to them.	Joseph Ives and James Wallace.....	Brooklyn, N. Y.....	Oct. 6, 1830
Springs, carriage, and attaching carriage bodies to them.....	David A. Morton.....	Groton, N. Y.....	Jan. 9, 1826
Springs, carriage, and attaching carriage bodies to them.	J. Jones, Allan Eells, and Horace Griswold	Delaware co., N. Y....	July 16, 1836
Springs, carriage, elliptic.....	Melzar Tuells.....	Pen Yan, N. Y.....	July 9, 1808
Springs, carriage, gig, connect- ing.....	Amos Davis.....	Easton, Md.....	Mar. 18, 1835
Springs, carriage, leaves of steel..	Micah Seabury.....	New York.....	April 20, 1833
Springs, carriage, manner of ap- plying.....	John S. Tough.....	Baltimore, Md.....	June 9, 1842
Springs, carriage, main.....	Jonathan Mix.....	New Haven, Conn....	April 18, 1807
Springs, carriage, railroad cars..	Porter Hill.....	Veteran, N. Y.....	Nov. 25, 1837
Springs, carriage, steel, edging and drawing.....	George Stouinger....	Newark, N. J.....	Jan. 11, 1831
Springs, carriage, steel, elliptical.	Charles Hinkle.....	Lehigh county, Pa....	Nov. 12, 1831
Springs, carriage, spiral, folding..	James Armour, jr....	Baltimore, Md.....	June 27, 1808

INVENTOR OR DISCOVERER.	PATENTEE.	REFERENCE.	DATE.
Springs, elliptical, for carriages...	Franking Hatch and Jonathan W. Terry.	SouthCortlandt, N.Y.	July 10, 1839
Springs, elliptical, for carriages...	Sumner King.....	Connecticut.....	Oct. 31, 1839
Springs, elliptical.....	David A. Edwards...	Boston, Mass.....	Nov. 16, 1841
Springs, elliptical, forming the sockets of.....	William T. Richards.	Poultney, Vt.....	Nov. 16, 1841
Springs, elliptical, setting and fitting.....	George J. Neveil.....	Philadelphia, Pa....	Sept. 20, 1839
Springs and levers to sustain the body of wagons.....	Elihu Ring.....	Trumansburg, N. Y.	July 29, 1841
Springs, for locomotives.....	Johannes Oberhauser	Charleston, S. C....	Feb. 15, 1838
Springs, pneumatic, piston of*...	Alexander Connison..	Belleville, N. J.....	Dec. 23, 1841
Springs for railroad carriages.....	Patrick Riley.....	Shamokin, Pa.....	June 21, 1839
Springs for railroad carriages.....	William Duff.....	Baltimore, Md.....	Jan. 9, 1841
Springs, railroad cars, in which atmospheric air is employed.....	Levi Bissell.....	Newark, N. J.....	Oct. 11, 1841
Springs for railroad cars.....	James Milholland.....	Baltimore, Md.....	Sept. 23, 1843
Springs for railroad cars.....	Ross Winans.....	Baltimore, Md.....	June 14, 1834
Springs for railroad cars†.....	Fowler M. Ray.....	Catskill, N. Y.....	Nov. 3, 1838
Springs, rollers, for pleasure wagons.....	John Barton, jr.....	Providence, R. I....	Sept. 9, 1835
Springs for railroad truck.....	Joseph F. Tolson.....	Jersey City, N. J....	Mar. 18, 1842
Spring seat, for carriages.....	Jonathan Nichols.....	Providence, R. I....	Oct. 2, 1838
Spring seat, for wagons.....	Schuyler Reynolds.....	New York.....	July 17, 1839
Springs, setting.....	David C. Andrews...	Westmoreland, Pa....	Sept. 6, 1838
Springs, spiral, to elliptical or bow for carriages.....	William Creasdale...	Hartsville, Pa.....	Feb. 3, 1837
Springs, steel, for carriages.....	Lyman Gleason.....	Stafford, N. Y.....	Dec. 24, 1834
Springs, thorough braces.....	Jonathan Mix.....	New Haven, Conn....	June 30, 1808
Springs, thorough brace.....	Frederick Davis.....	Baltimore, Md.....	Nov. 6, 1834
Springs, traverse.....	Nathan A. Stoddard...	Pawlet, Vt.....	April 2, 1825
Springs, wagon.....	Hazard Knowles.....	Colchester, Conn....	Nov. 4, 1825
Springs, wagon.....	Walter James.....	Ashford, Conn.....	June 6, 1826
Springs, wooden.....	William Robinson.....	Wilmington, Del....	Nov. 27, 1810
Springs, wooden.....	Luke H. Thrall.....	Troy, N. Y.....	Nov. 10, 1813
Springs, wooden.....	Levin Birkhead.....	Philadelphia, Pa....	Dec. 30, 1814
Springs, wooden.....	James Greenwood.....	Newcastle, Del....	April 28, 1818
Springs, wooden.....	James Clark.....	Kent county, Del....	July 31, 1819
Springs, wooden, horizontal.....	Leonard Somner.....	Downington, Pa....	July 22, 1811
Steps for coaches.....	George Carter.....	Newark, N. J.....	Nov. 26, 1831
Steps for coaches.....	Charles M. King.....	Newark, N. J.....	Dec. 31, 1833
Sulkey seat.....	O. H. Capron and G. Barton, jr.....	Shaftsbury, Vt.....	Jan. 23, 1836
Tire, bending.....	Charles Cooper and Abraham Tustin.....	Lebanon, Pa.....	Sept. 28, 1825
Tire, bending.....	Walter James.....	Ashford, Conn.....	June 19, 1826
Tire, bending.....	Walter James.....	Ashford, Conn.....	July 14, 1827
Tire, bending.....	Lester Butler and Isaac Hinckley.....	Cobleskill, N. Y....	Mar. 26, 1830
Tire, bending.....	Thomas C. Barton.....	New York city.....	July 31, 1837
Tire, bending.....	Joseph Meredith.....	Lebanon, Pa.....	Sept. 9, 1835
Tire, bending.....	Aaron Whitcomb.....	Choconut, Pa.....	Aug. 21, 1839
Tire, bending, hoops.....	Josiah Butler.....	Cobleskill, N. Y....	Sept. 24, 1839
Tire, bending hoops and bands...	Daniel Shepardson...	Hamilton, N. Y....	Feb. 7, 1831
Tire, and carriage springs, machine for bending.....	Fowler M. Ray.....	Catskill, N. Y.....	Dec. 24, 1834
Tire, and hoops, punching and bending.....	William Hinds.....	Springfield, N. Y....	Mar. 7, 1833
Tire, putting on the wheels on railroad cars.....	Thomas Banks.....	Great Britain.....	Aug. 25, 1842
Tires, setting upon wheels.....	George H. Thatcher...	Ballston, N. Y.....	Dec. 12, 1846
Tire, for wheels.....	James H. Rogers.....	Mount Morris, N.Y.	Feb. 17, 1836
Tire, for wheels, facing iron with steel.....	William Johnson.....	Newark, Del.....	May 30, 1838

* Antedated Dec. 20, 1841.

† Released Sept. 25, 1840, and June 8, 1841.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHERE ISSUED.
Tire, for wheels, drilling.....	Thomas C. Barton...	New York.....	July 31, 1837
Transporting and conveyance machine.....	John J. Reekers.....	Baltimore, Md.....	July 21, 1838
Transporting weights.....	James Cornell.....	Brookfield, Vt.....	Dec. 24, 1834
Truck, double cylinder, for raising stone.....	Simon Frieze.....	Waterloo, Md.....	Aug. 23, 1834
Truck, for railroads.....	Fowler M. Ray.....	New York.....	Mar. 21, 1845
Truck, railroad.....	John F. Rodgers.....	Troy, N. Y.....	Sept. 5, 1846
Velocipede.....	Wm. K. Clarkson, jr.....	New York.....	June 26, 1819
Velocipede, chiro.....	Gideon Parker.....	Providence, R. I.....	Nov. 1, 1825
Velocity on railroads.....	Jacob Nollner.....	Washington, D. C.....	April 13, 1836
Wagon.....	Sherman Blair.....	New Haven, Conn.....	June 20, 1823
Wagon bodies, raising & lowering	Thomas Scott.....	Loudon, Pa.....	Mar. 3, 1829
Wagon boxes, moulds for casting	James Mollineaux.....	Northampton, Pa.....	July 12, 1843
Wagons and other carriages.....	Horace Wood.....	Greenwich, N. Y.....	July 8, 1843
Wagons, carts, &c., attaching boxes to.....	Jason C. Osgood.....	Chittenango, N. Y.....	Sept. 28, 1839
Wagons, coaches, and breaks for.	Henry West.....	Quincy, Mass.....	Sept. 29, 1836
Wagon, hand.....	John Bolton, jr.....	New York.....	Sept. 29, 1804
Wagon, hanging.....	Henry Mellish.....	Walpole, N. Y.....	Jan. 11, 1836
Wagon, manure.....	James Bowman.....	Coosauwatchie, S. C.....	Aug. 12, 1829
Wagon, for removing earth.....	John Owings.....	Baltimore, Md.....	Aug. 27, 1834
Wagons and sleighs, drawing.....	Mylo Knapp.....	Springwater, N. Y.....	Sept. 5, 1846
Wagon, tilting.....	Abm. Hobart.....	Braintree, Mass.....	Feb. 17, 1807
Wagon, tilting.....	Stephen Beebe.....	Norwich, Ct.....	June 22, 1836
Wagon, or other wheeled vehicles	Elisha Brown.....	Stockbridge, Mass.....	Jan. 23, 1834
Wagon, or other wheeled vehicles	Reuben Rich.....	Albion, N. Y.....	July 22, 1834
Wheels.....	John Coon.....	Granville, N. Y.....	Aug. 6, 1806
Wheels.....	M. Hunt & C. White.....	Hartford, Mass.....	June 15, 1813
Wheels.....	Bracket L. Greenough.....	Lebanon, N. H.....	Sept. 12, 1815
Wheels.....	John Whitaker.....	Dingman's Ferry, Pa.....	June 24, 1822
Wheels.....	William Cooper.....	Columbia, S. C.....	Mar. 3, 1825
Wheels.....	George D. Bridgman.....	New Haven, Ct.....	July 16, 1829
Wheels, apparatus to prevent falling when axletree breaks.....	Wm. Zollickoffer.....	Middleburg, Md.....	April 30, 1832
Wheels and axles.....	Aaron Hale.....	Boston, Mass.....	April 2, 1835
Wheels and axles of locomotive engines, & rails adapted to them	Richard Berrian.....	New York.....	Nov. 13, 1839
Wheels, boring hubs & fellows for	David Sperry.....	Colchester, Ct.....	May 12, 1812
Wheels, boxes for.....	Thos. B. Whitlock.....	New Jersey.....	Feb. 23, 1802
Wheels, boxes for.....	James Gredley.....	Boston, Mass.....	May 23, 1806
Wheels, boxes for.....	Levi Brown.....	Berkshire, Mass.....	May 30, 1806
Wheels, boxes for.....	John Nicholson.....	Herkimer, N. Y.....	April 28, 1810
Wheels, boxes, and axles of carriage, applying anti-friction rollers to.....	George G. Tibbets.....	New York, N. Y.....	July 22, 1830
Wheels, boxes for axletrees and gudgeons*.....	Isaac Babbitt.....	Boston, Mass.....	July 17, 1839
Wheels, boxes, anti-friction rollers	William Edwards.....	Baltimore, Md.....	Sept. 11, 1817
Wheels, boxes, and axletrees for.	Aaron Broad.....	Salisbury, Ct.....	June 14, 1809
Wheels, boxes, and axletrees.....	William Batchelor.....	New York.....	May 2, 1816
Wheels, boxes, casting.....	Calvin Darby.....	Worcester, Mass.....	Jan. 22, 1835
Wheels, boxes, casting.....	William Butler and E. B. Rice.....	Worcester, Mass.....	May 31, 1833
Wheels, boxes, cast iron.....	Jer. Wilts.....	Chambersburg, Pa.....	Dec. 28, 1825
Wheels, boxes, cast or wrought iron.....	Sullivan Reynolds.....	Guilford, N. Y.....	June 13, 1829
Wheels, boxes, fitting to.....	J. & C. Putnam.....	Hallowell, Me.....	April 28, 1836
Wheels, boxes, letting in.....	Orlando A. Fuller.....	Vernon, N. Y.....	Dec. 21, 1831
Wheels, boxes, retaining.....	Henry Barton.....	Rochester, N. Y.....	July 22, 1834
Wheels, boxes, self-fastening.....	Thomas Mussey.....	New London, Ct.....	June 11, 1829
Wheels, boxes, setting.....	Josiah Chaney.....	Chester, Me.....	Oct. 25, 1832
Wheels, boxes, for wood or iron to turn in.....	William Shotwell.....	New Jersey.....	Feb. 2, 1800

* Additional improvement, Sept. 4, 1840; disclaimer, Aug. 6, 1840.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN GRANTED.
Wheels, boxes, and hubs, and hanging coach bodies.....	David Watson.....	Fayette, Mass.	May 29, 1832
Wheels, car.....	Alexander Small.....	York, Pa.	Dec. 10, 1846
Wheels, car.....	Fowler M. Ray.....	New York, N. Y.	Dec. 17, 1846
Wheels, car.....	David Cockley.....	Lancaster, Pa.	Oct. 21, 1839
Wheels, car and carriage, chilling	Phineas Davis.....	Baltimore, Md.	July 29, 1834
Wheels, car, cast iron.....	Henry Morey.....	Beaver Meadow, Pa	Mar. 10, 1838
Wheels, car, cast iron.....	Jonathan Bonney, Cha. Bush, and George B. Lobdell.....	Wilmington, Del...	Mar. 17, 1838
Wheels, car, cast iron.....	Samuel Truscott, Geo. Wolfe, and James Dougherty.....	Columbia, Pa.	Mar. 17, 1838
Wheels, car, cast iron.....	Wm. W. Bergstresser	Harrisburg, Pa.	Jan. 11, 1840
Wheels, car, constructing.....	Albert Fuller.....	Providence, R. I.	Oct. 14, 1840
Wheels, car, for curved railroads.	Abel Look.....	Waterford, N. Y.	Dec. 31, 1833
Wheels, car, drilling and boring..	Dean Walker.....	Gunpowder, Md.	Dec. 28, 1833
Wheels, car, iron.....	William W. Pennell..	Lancaster, Pa.	Feb. 8, 1839
Wheels, car, locomotive engine ..	Ress Winans.....	Baltimore, Md.	Nov. 19, 1833
Wheels, for cars, railroad, and engine.....	James Stimpson.....	Baltimore, Md.	Oct. 23, 1834
Wheels, for carriages.....	Joel Eastman and Guy C. Rix.....	Bath, N. H.	Dec. 23, 1836
Wheels, for carriages.....	Isaac Van Gorder....	Warren, Ohio.....	Jan. 7, 1833
Wheels, for carriages.....	Henry Beebe.....	Haverstraw, N. Y.	Mar. 19, 1834
Wheels, for carriages.....	Elisha Tolles.....	Hartford, Ct.	Dec. 27, 1839
Wheels, for carriages.....	G. L. Ackerman.....	Troy, N. Y.	April 16, 1843
Wheels for carriages, construction of.....	Eliphalet S. Scripture.	Syracuse, N. Y.	April 1, 1845
Wheels, carriage, and harness...	George Barnant.....	Washington, D. C. ...	May 25, 1836
Wheels, carriage, hub-bands for.	Samuel E. Farrand...	Newark, N. J.	June 11, 1839
Wheels, carriage, immersing in water after putting on the hoop or tire.....	James Morris.....	Bloomfield, N. J.	Sept. 23, 1843
Wheels, carriage, preventing horses from running away.....	Russell Jarvis.....	Boston, Mass.	Mar. 29, 1834
Wheels, carriage, for railroad....	Robert Grant.....	Baltimore, Md.	Nov. 3, 1838
Wheels, carriage, wrought iron..	James McCullum....	Wilsonville, Ala.	May 10, 1844
Wheels, cart and carriage.....	William Woodbridge.	Kennebec, Me.	May 17, 1836
Wheels, cast iron, for locomotive steam engines.....	Thatcher Perkins and William Mahon....	Boston, Mass.	April 10, 1843
Wheels, cast iron, railroad.....	Ebenezer A. Lester....	Boston, Mass.	Aug. 10, 1844
Wheels, confining carriage to....	Clark Force.....	Baltimore, Md.	April 28, 1836
Wheels, driving, of locomotive engines, increasing the adhesion..	Ezra L. Miller.....	Charleston, S. C.	June 19, 1834
Wheels, driving, of locomotive engines, increasing the adhesion..	Andrew M. Eastwick.	Philadelphia, Pa.	Nov. 30, 1837
Wheels, "easy motion, and pavement saving".....	Felix Varela.....	New York.	July 20, 1831
Wheels, felloes, bending.....	Tristram Kimball....	Salem, N. H.	Jan. 16, 1832
Wheels, felloes, bending.....	Edward Reynolds....	Haddonsfield, N. J. ...	July 17, 1836
Wheels, felloes, bending by steam	Merrit Blakeley.....	Canaan, Ct.	July 29, 1829
Wheels, felloes of carriage, machinery for sharpening the inside of the felloes.....	Robert Hugh Henry .	Barre, Mass.	Nov. 21, 1842
Wheels, felloes, cutting machine..	J. S. Brown and Jacob J. Barker.....	Philips, Me.	Oct. 14, 1835
Wheels, felloes, cutting machine..	W. Bradley and M. L. Worthley.....	Philips, Me.	Oct. 14, 1835
Wheels, felloes, cutting & dressing	Samuel Church.....	Amherst, Mass.	April 25, 1810
Wheels, felloes, cutting & dressing	Joseph Goulding....	Leicester, Mass.	Feb. 28, 1811
Wheels, felloes, cutting & dressing	B. L. Greenough....	Lebanon, N. H.	Dec. 22, 1824
Wheels, felloes, sawing.....	Phoebe Collier, widow of James.....	Catskill, N. Y.	May 20, 1826

* Antedated Oct. 16, 1844.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Wheels, felloes, sawing.....	Barnabas Ruggles....	Poultney, Vt.	June 29, 1836
Wheels, felloes, sawing.....	George Andrews....	Tolland, Ct.	Oct. 24, 1836
Wheels, felloes, sawing.....	Samuel Fahrney....	Washington, Md....	Dec. 2, 1836
Wheels, felloes, sawing.....	Alvan Colby.....	Sharon, Vt.	Oct. 15, 1836
Wheels, felloes, sawing.....	David D. Hanson....	Ware, N. H.	Oct. 20, 1836
Wheels, felloes, sawing or cutting	Samuel Church....	Amherst, Mass....	May 4, 1835
Wheels, felloes, sawing or cutting	William E. Sheffield..	New York.....	Dec. 21, 1836
Wheels, felloes, sawing & boring.	James Hamilton....	New York.....	April 29, 1833
Wheels, felloes, sawing & boring.	William W. Forward..	Abingdon, Md....	Nov. 19, 1833
Wheels, friction, for railroad carriages.....	H. B. Chew.....	Baltimore, Md....	April 9, 1839
Wheels, horse, detaching.....	Philip T. Share....	Baltimore, Md....	Mar. 18, 1836
Wheel hubs.....	Garretson Lyon....	New York.....	Dec. 26, 1836
Wheel hubs.....	Hercules Thomas....	Middleborough, Mas	Sept. 11, 1839
Wheel hubs.....	John Atherton....	Philadelphia, Pa....	June 2, 1836
Wheel hubs*	Howard Delano....	Skaneateles, N. Y..	Oct. 26, 1837
Wheel hubs and axles for cars, cutting the seats.....	Thomas J. Butler....	Johantown, Pa....	Dec. 31, 1839
Wheel hubs, and axletrees.....	Phineas Slayton....	Lockport, N. Y....	Oct. 27, 1836
Wheel hubs, bands for.....	Samuel H. Miller....	Elizabethtown, N. J.	Oct. 7, 1839
Wheel hubs, bands for, carriage or gig.....	Christian Cornelius...	Philadelphia, Pa....	June 18, 1834
Wheel hubs, blocks, bushing.....	T. & D. Curtis.....	Washington, D. C..	Jan. 23, 1836
Wheel hubs, boring.....	James Hinds.....	Troy, N. Y.....	Nov. 25, 1837
Wheel hubs, boring and mortising	Robert McCarty....	Martinsburg, N. Y..	Mar. 31, 1834
Wheel hubs, boring and mortising	James Tompkins....	Conesville, N. Y....	Oct. 6, 1837
Wheel hubs, boring on the inside, and the boxes for lynch cups..	John R. Morrison....	Springfield, Ohio...	May 13, 1834
Wheel hubs, boring and reaming.	Eben Johnson.....	Lex'ton Heights, N. Y.	Nov. 7, 1836
Wheel hubs, boxes for, and ship's blocks.....	Isaac Cooper.....	Baltimore, Md....	Jan. 27, 1839
Wheel hubs, box setter, for boring in.....	Edward Badlam, jr....	Chester, Vt.	Sept. 19, 1835
Wheel hubs, of car, chilling.....	Heekin Thomas....	Beaver Meadow, Pa.	Oct. 13, 1836
Wheel hubs, carriage or wagon..	Abraham Randel....	Vernon, N. Y.....	Sept. 8, 1837
Wheel hubs, carriage, attaching to the arms of axletrees.....	George Hunt.....	Prattsville, N. Y....	July 8, 1839
Wheel hubs, carriage, attaching to axles.....	John London, jr....	Auburn, N. Y.....	Oct. 12, 1839
Wheel hubs, carriage, greasing & keeping dust out of the boxes of	Nathaniel C. Day....	Lunenburg, Mass....	July 10, 1840
Wheel hubs, carriage, securing the boxes to their axles.	Lyman Smith, jr., and Griffin R. Waring..	Derby, Ct.	June 17, 1840
Wheel hubs, cast iron.....	Benjamin Lyman....	Manchester, Ct....	Oct. 29, 1835
Wheel hubs, cast iron.....	Benjamin Lyman....	Manchester, Ct....	Nov. 6, 1837
Wheel hubs, cast iron.....	William Dickinson...	Batavia, N. Y.....	Oct. 11, 1836
Wheel hubs, cast iron.....	John Thruston....	Providence, R. I....	Dec. 3, 1833
Wheel hubs, cast iron.....	Carver Washburn....	Bridgewater, Mass..	Jan. 18, 1838
Wheel hubs, cutting and boring the end to let in boxes.....	John B. Francis....	Loudoun co., Va....	Mar. 2, 1832
Wheel hubs, dividing and boring.	James B. Cleveland..	Bergen co., N. J....	June 7, 1839
Wheel hubs, and felloes, boring..	David Sperry.....	Colchester, Ct....	May 12, 1832
Wheel hubs, herculean carriage..	Hercules Thomas....	Medway, Mass....	Feb. 8, 1838
Wheel hubs, lining metallic boxes for.....	Moses Palmer.....	Baltimore, Md....	Mar. 9, 1844
Wheel hubs, mortising.....	Parvin Paulin.....	Darrrtown, Ohio....	April 17, 1833
Wheel hubs, pipe box for.....	James Jones.....	Galway, N. Y.....	April 1, 1845
Wheel hubs, and rotary bearings, anti-friction boxes.....	E. Fisk & J. C. Green	Fayette, Me.....	Nov. 14, 1835
Wheels, iron.....	Robert Crase, jr....	Woodbury, Ct....	May 4, 1835
Wheels, iron, for railroad carriages	John Finkay.....	Baltimore, Md....	Mar. 1, 1839
Wheels, for locomotive carriages and railroad cars.....	Matthias W. Baldwin..	Philadelphia, Pa....	June 29, 1833

* Released Sept. 25, 1839.

† Announced July 1, 1839.

‡ Additional imp., Feb. 7, 1831.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	YEAR GRANTED.
Wheels, of locomotives, ascending inclined planes.....	Elisha Town.....	Montpelier, Vt.....	July 31, 1837
Wheels, of locomotive engines...	Henry R. Dunham...	New York.....	Feb. 15, 1838
Wheels, for railroad cars.....	John Baker.....	Lancaster, Pa.....	Mar. 20, 1835
Wheels, for railroad cars.....	George W. Eddy.....	Waterford, N. Y.....	Dec. 26, 1845
Wheels, for railroad carriages....	John Elgar.....	Philadelphia, Pa.....	Nov. 19, 1833
Wheels, for railroad cars, const'ng	Arundius Tiers.....	Kensington, Pa.....	Dec. 2, 1835
Wheels, for railroad cars, const'ng	William Creed.....	Boston, Mass.....	Feb. 24, 1843
Wheels, for railroad cars and loco- motives.....	James Stimpson.....	Baltimore, Md.....	Oct. 23, 1834
Wheels, for railroad cars, to pre- vent friction.....	Samuel Krauser.....	Reading, Pa.....	Nov. 2, 1831
Wheels, for railroad carriages....	James Stimpson.....	Baltimore, Md.....	Aug. 23, 1831
Wheels, railroad, connecting and fastening the rims.....	Thomas Glasco.....	Wilmington, Del...	April 4, 1846
Wheels, railroad, constructing...	Henry Dircks.....	Liverpool, Eng.....	June 26, 1841
Wheels, reaming out and setting boxes in.....	Eben Johnson.....	Lex'ton Heights, N. Y.	Nov. 7, 1826
Wheels, reverting.....	Otis Paine.....	Foxborough, Mass.	Mar. 1, 1811
Wheels, spokes for.....	Daniel H. Wiswell...	Petersham, Mass...	April 12, 1833
Wheels, spokes, cutting tenons on	Jona. Reynolds.....	Dutchess co., N. Y.	June 24, 1815
Wheels, spokes, cutting tenons on	Andrew P. Smith....	Cornwall, Ct.....	Nov. 1, 1830
Wheels, spokes, cutting tenons on	James Smith.....	Fayette, Me.....	June 7, 1832
Wheels, spokes, cutting tenons on	John Lenher.....	Cocalico town'p, Pa.	July 28, 1834
Wheels, spokes, cutting tenons on	William Gerrish.....	Portsmouth, N. H..	July 21, 1835
Wheels, spokes, cutting tenons & shoulders.....	Pitner Emmitt.....	Hopewell, Pa.....	June 29, 1833
Wheels, spokes, dressing.....	Daniel Wiswell.....	New York.....	Nov. 19, 1833
Wheels, spring, for carriages....	Barney Ruggles.....	Warsaw, N. Y.....	Sept. 8, 1834
Wheels, tiring.....	Russell Hunt, 2d....	Litchfield, Ct.....	Mar. 20, 1821
Wheelbarrows.....	Jeremiah Brainard...	Rome, N. Y.....	Aug. 26, 1819
Wheelbarrows.....	Nathan Tufts, 2d....	Charlestown, Mass.	Sept. 13, 1824
Wheelbarrows, horse.....	Jireh Rowley.....	Pittsford, N. Y.....	Nov. 1, 1825
Wheelwrights' assistant.....	John Sitton.....	Pendleton, S. C....	Feb. 15, 1827
Wheelwrights' assistant.....	Cyrus W. Beach.....	Schoharie, N. Y....	Mar. 16, 1827
Wheelwrights' labor sav'g machine	Mellen Battle.....	New York.....	April 4, 1810

CLASS No. XI.

HYDRAULICS AND PNEUMATICS,

**Including Water Wheels, Wind-mills, and other implements
operated on by Air or Water, or employed in
Raising and Delivery of Fluids.**

LIST OF PATENTS.

CLASS XI.—HYDRAULICS AND PNEUMATICS, including Water-wheels, Windmills, and other implements operated on by Air or Water, or employed in raising and delivery of Fluids.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Aerostats, or balloons, &c., directing*.....	Muzio Muzzi.....	Bologna, Italy.....	Oct. 16, 1844
Air, action, for propelling boats.	James Black.....	Orangeville, O.....	July 24, 1836
Air, condensed, for propelling boats, cars.....	Alexander McGrew ..	Cincinnati, Ohio....	Oct. 27, 1835
Air pump in low pressure engines— Air, rarified and unrarified, obtaining power by.....	See Class 6.		
Band, chain, with buckets.....	Samuel Morey.....	Philadelphia, Pa....	April 8, 1818
Bellows.....	Stephen Belknap.....	New York.....	Dec. 28, 1800
Bellows.....	James Rumsey.....	Berkley county, Va.	Aug. 26, 1791
Bellows.....	James Drake.....	New Jersey.....	May 19, 1794
Bellows.....	Charles McMurtry...	New Marlboro' Mas	May 8, 1811
Bellows.....	Josiah J. Eddy.....	Providence, R. I....	Sept. 9, 1825
Bellows.....	Jesse Dixon.....	Pittsburg, N. C....	June 11, 1827
Bellows.....	Elijah Brady.....	Mount Pleasant, N Y	April 3, 1828
Bellows.....	Luna Bishop.....	Readsborough, Va..	Dec. 22, 1831
Bellows.....	James Robe.....	Morgantown, Va....	April 17, 1834
Bellows.....	George L. Dimpfel...	New York.....	May 23, 1834
Bellows, double.....	William Lillie.....	Edwards, N. Y....	June 24, 1845
Bellows, furnace.....	John W. Godfrey...	Pennsylvania.....	May 25, 1803
Bellows, furnace.....	Henry Dotterer.....	Philadelphia, Pa....	April 24, 1825
Bellows, hand.....	John Grennell.....	Springfield, Mass...	Aug. 3, 1838
Bellows, japanned.....	R. B. Richardson...	Philadelphia, Pa....	Aug. 22, 1817
Bellows, nozzle, preventing burning.....	James Dodge, jr.....	St. Albans, Vt.....	Jan. 24, 1824
Bellows, portable.....	Alexander Ewing.....	New York.....	Oct. 31, 1839
Bellows, pump, elastic piston....	Henry Dotterer.....	Philadelphia, Pa....	May 1, 1810
Bellows, pump, for forges.....	Henry Dotterer.....	Philadelphia, Pa....	Feb. 16, 1809
Bellows, pump, for furnace.....	Isaiah Jennings....	New York.....	Sept. 20, 1808
Bellows, rotary.....	Albin Savage and Hervey Killam.....	Scottsville, N. Y....	Nov. 24, 1848
Bellows, smiths'.....	Alonson Holmes.....	Pomfret, N. Y....	Mar. 28, 1818
Bellows, smiths' and furnace fires	John B. Morrison...	Springfield, Ohio...	Dec. 23, 1834
Bellows, steam.....	John Stevens.....	Bergen county, N. J.	Aug. 26, 1791
Bellows, steam.....	Joel Eastman.....	Bath, N. H....	April 8, 1831
Bellows, steam.....	Martin Bell.....	Antes township, Pa.	April 24, 1838
Bellows, triangular, for foundaries	William S. Jacks....	New York.....	April 4, 1829
Bellows, tub.....	A. A. McPharrin...	Huntingdon, Pa....	June 11, 1829
Bellows, wooden.....	Benj. & John Tyler..	Claremont, N. H....	Feb. 1, 1817
Blowing wind for forges.....	Daniel Stobel.....	Washington, D. C...	May 9, 1831
Blow pipe, for furnace.....	J. Barker.....	Baltimore, Md.....	Feb. 12, 1836
Blow pipes, table,.....	Rufus Somerby.....	Louisville, Ky.....	Nov. 15, 1842
Boring earth for water, apparatus for.....	Levi Disbrow.....	Syracuse, N. Y....	Nov. 1, 1830
Boring and tapping water, &c., while under hydrostatic pressure	H. Ariel Norris.....	New York, N. Y....	June 22, 1842
Boring, tapping, and reaming water pipes under hydrostatic pressures.....	H. Ariel Norris.....	New York, N. Y....	Sept. 30, 1842
Bucket, well emptying.....	Elijah Willard.....	Egremont, Mass....	June 15, 1836
Cements, hydraulic.—See Class 4			

* Date French Patent, May 12, '44. † Rehearsd Oct. 20, 1838. ‡ Rehearsd Aug. 11, '42, § Released Sep. 9, '43.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Cistern—See Gypsum, Class 15.			
Cisterns, brick.....	Jacob Peebles.....	Concordia, La.....	July 20, 1846
Cisterns, preventing water freezing	Joshua Woodward...	Haverhill, N. H.....	Nov. 21, 1843
Cistern, rain water.....	George O. Blenis.....	Salina, N. Y.....	Aug. 18, 1837
Cistern, reservoirs, vats, &c.....	Levi Kidder.....	New York.....	Nov. 14, 1835
Cistern, reservoirs, and walls for holding water	Nathaniel Foster and Wm. Van Vleck...	Sullivan, N. Y.....	Mar. 3, 1834
Cisterns, rotary curve for making	Orlando Owen.....	Burlington, Vt.....	Oct. 7, 1846
Cistern, water.....	Samuel Booth.....	Syracuse, N. Y.....	Aug. 20, 1833
Cistern, water.....	George Tibbets, jr....	Jamesville, N. Y....	Dec. 30, 1833
Cistern, water.....	Levi Kidder.....	New York.....	Jan. 21, 1831
Cistern, water.....	Alfred Palmer.....	Syracuse, N. Y.....	Dec. 15, 1835
Cistern, water, (on booths).....	Obadiah Parker.....	Syracuse, N. Y.....	Sept. 15, 1834
Cistern, water, vaults.....	Horace J. Shumway..	Van Buren, N. Y....	Nov. 19, 1833
Cock	Jacob Bright.....	Sunbury, Pa.....	June 22, 1832
Cocks, construction of, for drawing water.....	Thomas C. Clark....	Philadelphia, Pa....	Mar. 14, 1846
Cock, for drawing liquor.....	Jona. Bliss.....	New York.....	Sept. 24, 1821
Cock, for drawing liquor.....	Eli Dickinson.....	Amherst, Mass.....	Dec. 17, 1823
Cocks, drawing liquors.....	Henry Rodgers.....	Auburn, N. Y.....	Oct. 9, 1841
Cock, filtering.....	Thomas F. Wenman..	New York, N. Y....	April 4, 1846
Cocks, or gas stoppers.....	Nathaniel D. Whitin..	New York, N. Y....	April 29, 1842
Cocks, hydrant.....	Ebenezer Hubball, assignee of Jos. Martin	Baltimore, Md.....	Feb. 10, 1841
Cocks, hydrant.....	Ebenezer Hubball....	Baltimore, Md.....	May 11, 1841
Cocks, hydraulic and pneumatic purposes.....	Jno. Lee Chapman...	Baltimore, Md.....	Oct. 11, 1841
Cocks, manufacture of.....	Charles A. Creasey..	Philadelphia, Pa....	April 29, 1841
Cock, metallic screw.....	Jer. Carey.....	Baltimore, Md.....	April 23, 1822
Cocks, molasses gate.....	Jonathan D. Kellogg & Jus. Wright; assigned to J. D. Kellogg.	Northampton, Mass	Aug. 16, 1839
Cocks, molasses gate.....	Jervise Whittemore..	Boston, Mass.....	Oct. 9, 1839
Cocks, molasses gate.....	Ammi West.....	Greene, Me.....	Aug. 28, 1840
Cocks, molasses gate.....	Levi Lincoln.....	Hartford, Ct.....	Nov. 10, 1841
Cock, passage of fluids.....	Joshua Witherle....	Boston, Mass.....	Jan. 19, 1811
Cock, to prevent water freezing in pent stocks, &c.....	Dixwell Lathrop, jr..	Norwich, Ct.....	Dec. 5, 1832
Cock, stop.....	Peter Walker.....	New York.....	April 10, 1800
Cock, stop.....	Daniel Sharman.....	Warren, N. Y.....	July 5, 1814
Cock, stop.....	John Morris.....	Hartford, Ct.....	Mar. 1, 1815
Cock, stop.....	John Morris.....	New Haven, Ct.....	May 15, 1822
Cock, stop.....	Gaines Fenn.....	New York.....	July 12, 1823
Cocks, stop.....	Chas. F. Johnson and J. J. Speed, jr.....	Oswego, N. Y..... } Ithaca, N. Y..... }	June 21, 1839
Cocks, stop.....	Ari Davis.....	Boston, Mass.....	Oct. 16, 1839
Cocks, stop.....	James Robertson....	New York.....	May 8, 1840
Cocks, stop.....	Horatio Allen.....	New York.....	Nov. 12, 1841
Cocks, stop.....	Francis Jos. Miller...	New York.....	Nov. 21, 1841
Cocks, stop*.....	Jonathan Ridgway....	New York, N. Y....	April 16, 1842
Cocks, stop.....	Uel West and George Dobbs.....	New York, N. Y....	April 30, 1842
Cock, stop.....	J. F. Ostrander.....	New York, N. Y....	April 4, 1846
Cock, stop, block tin.....	Jo. Dickinson.....	Hartford, Ct.....	Mar. 7, 1816
Cocks, stop, connecting for hydraulic purposes.....	Charles Wilson.....	New York, N. Y....	Oct. 28, 1816
Cock, stop, construction of.....	F. H. Bartholomew..	New York, N. Y....	Aug. 12, 1846
Cock, stop, and filter.....	William Read.....	New York, N. Y....	Oct. 24, 1846
Cocks, stop, for hydrant.....	L. Magers, F. D. Davis, and Wm. Dukehart.....	Baltimore, Md.....	June 22, 1842
Cocks, stop, for hydrants.....	Henry R. Dunham....	New York, N. Y....	Jan. 10, 1842

* Reissued to Jon. Ridgway, Jr., Sept. 22, 1843.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	DATE GRANTED.
Cocks, stop, in pipes under hydrostatic pressure, tapping and inserting.....	Horatio Allen.....	New York, N. Y....	Nov. 21, 1842
Cock, stop, pistons for.....	F. H. Bartholomew.....	New York, N. Y....	Aug. 12, 1846
Cock, valve.....	John Cluley and Benjamin Stanciliffe.....	Philadelphia, Pa....	Nov. 8, 1820
Cock, valve.....	Fred. D. Samno.....	Philadelphia, Pa....	June 29, 1821
Cock, valve, for hydrants.....	Benjamin Stanciliffe.....	Philadelphia, Pa....	May 15, 1827
Cock, valve and piston.....	John Lacey.....	Philadelphia, Pa....	May 6, 1823
Cock, water.....	George Youle.....	New York.....	Aug. 25, 1803
Cock, water.....	Eb. Hubball.....	Baltimore, Md.....	Oct. 4, 1820
Compressed air, for drawing liquids.....	Jasper Johnson.....	Genesee, N. Y....	May 30, 1837
Conduit, clay.....	Samuel Bartlett.....	Hartford, Ct.....	Jan. 15, 1809
Conduit, self-regulating.....	James Clarke.....	Westmoreland co, Pa....	Jan. 25, 1831
Elevator, raising fluids or grain.....	Robert Christy.....	Jefferson county, Va....	Nov. 21, 1812
Elevator, water.....	John Herrick jr.....	Albany, N. Y....	Feb. 1, 1810
Elevator, water.....	Enoch Honeywell.....	Broad Albin, N. Y....	July 10, 1820
Elevating water for mills.....	William Smith.....	Gloucester, N. J....	Aug. 12, 1808
Engine.....	Jacob Idler.....	Philadelphia, Pa....	July 31, 1819
Engine, crank, for raising and throwing water.....	Jos. Clapp.....	Montague, Mass....	Nov. 21, 1810
Engine, crank, (improvement on Clapp's).....	Jos. Clapp.....	Greenfield, Mass....	Nov. 15, 1831
Engine, elevating and throwing water.....	Thomas A. Chandler.....	Norfolk, N. Y....	Aug. 9, 1834
Engine, fire.....	Jesse Kersey.....	Pennsylvania.....	April 13, 1797
Engine, fire.....	Samuel E. Hamlin.....	Rhode Island.....	Aug. 30, 1799
Engine, fire.....	Stephen Stewart.....	New York.....	Dec. 6, 1803
Engine, fire.....	Jacob Smith, jr.....	New York.....	May 20, 1807
Engine, fire.....	Isaac Hathaway.....	Walton, N. Y....	Aug. 6, 1812
Engine, fire.....	Allen Pollock and Jacob Perkins.....	Boston, Mass.....	Aug. 6, 1812
Engine, fire.....	John Achman.....	Washington, D. C....	Dec. 30, 1812
Engine, fire.....	Jacob Perkins.....	Newburyport, Mass....	Mar. 23, 1813
Engine, fire.....	John Richardson, jr.....	Shrewsbury, Mass....	July 24, 1818
Engine, fire.....	Eb. Bryant.....	New London, Conn....	Mar. 28, 1820
Engine, fire.....	S. Lockwood and W. Loveland.....	Little Falls, N. Y....	April 16, 1822
Engine, fire.....	Eb. Higgins.....	Saratoga, N. Y....	April 27, 1822
Engine, fire.....	George Shalk and Wm Tintoff.....	Lebanon, Pa.....	Sept. 23, 1826
Engine, fire.....	Ezekiel Daboll.....	Canaan, Conn.....	April 12, 1828
Engine, fire.....	John J. Giraud.....	Baltimore, Md.....	Nov. 11, 1830
Engine, fire.....	Nathan Pierce.....	Whitehall, N. Y....	Feb. 23, 1831
Engine, fire.....	Thomas Odiorne.....	Portsmouth, N. H....	Aug. 27, 1835
Engine, fire.....	John Williams, jr.....	Salem, N. Y....	May 11, 1839
Engine, fire.....	Asa Barrett.....	Baltimore, Md.....	Feb. 18, 1841
Engine, fire.....	Joseph B. Babcock.....	Marietta, Ohio.....	July 1, 1841
Engine, fire.....	Joseph Briggs, jr.....	St. Louis, Missouri..	Sept. 3, 1842
Engine, fire.....	Gardner Barton, jr.....	Waterford, N. Y....	Aug. 16, 1844
Engine, fire.....	Earnest Marx.....	New York.....	Dec. 20, 1845
Engine, fire.....	Gardner Barton and L. Button.....	Waterford, N. Y....	Sept. 19, 1846
Engine, fire.....	Charles W. Grannis.....	Collins, N. Y....	Oct. 7, 1846
Engine, fire, &c., applying water to.....	Franklin Ransom and Uzziah Wenman.....	New York.....	Feb. 13, 1841
Engine, fire, domestic.....	William Wadsworth.....	Hartford, Conn.....	Mar. 16, 1820
Engine, fire, horizontal.....	Luther Holland.....	Belchertown, Mass....	Mar. 11, 1824
Engine, fire, method of working the lever.....	Samuel Huse.....	Newburyport, Mass....	April 9, 1833
Engine, fire, and water pump.....	E. Williams & J. Collins.....	Falley Roads, Mass....	June 20, 1833
Engine, fire, pump for.....	Henry Gates.....	Northampton, Mass....	June 12, 1835
Engine, hydraulic, revolving.....	Asahel Hubbard.....	Windsor, Vt.....	April 22, 1828

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	DATE.
Engine, hydraulic	Patrick Lyon	Pennsylvania	Feb. 12, 1860
Engine, hydraulic	John Strong	Massachusetts	Mar. 24, 1861
Engine, hydraulic	Fred. Lippart	Keetstown, Pa.	May 3, 1865
Engine, hydro-pneumatic	Richard Crosbie	Newark, N. J.	Jan. 6, 1867
Engine, hydro-pneumatic	Richard Wilcox	New York	Nov. 1, 1867
Engine, hydrostatic	Daniel Livermere	Blairsville, Pa.	July 24, 1834
Engine, hydrostatic, and steam	Stephen H. Long and Geo. F. A. Hauts ..	Germantown, Pa. ...	Sept. 3, 1813
Engine, pneumatic	John R. Remington ..	Aberfoil, Alabama ..	May 26, 1847
Engine, screw, for throwing water	Elijah Ormebee	Rhode Island	Mar. 21, 1796
Engine, water	Samuel Morey	New Hampshire	April 24, 1799
Engine, water	Joel M. Dupuy	Woodford, Ky.	April 13, 1814
Engine, hydraulic, steam.—See Class 6.	William Read	New York, N. Y.	May 23, 1846
Faucets, boring barrels for	Ira Ives	Bristol, Conn.	April 14, 1869
Faucets, drawing liquor	Jer. Brainard	Oneida co., N. Y.	Oct. 4, 1817
Faucets, gate	Charles Goodyear	Philadelphia, Pa.	Feb. 5, 1834
Faucets, or molasses gate	Charles W. Peckham ..	New Haven, Conn.	Feb. 10, 1836
Faucets, molasses	William Jones	New York	May 13, 1812
Faucets, plugged	Jonathan Bliss	Philadelphia, Pa.	June 4, 1837
Faucets, and apigot	Charles Goodyear	Philadelphia, Pa.	Mar. 16, 1838
Faucets, spring lever	Littleton Ayres	Baltimore, Md.	July 8, 1834
Filtering apparatus	Jos. Du Common	New York	Feb. 10, 1816
Filtering machine	Isaac Wiseman	New York	Aug. 20, 1834
Filtering machine	Michael Freytag	Philadelphia, Pa.	July 1, 1867
Filtering pot	Dan'l McMullin and Thos. M. Corby .....	.....	Nov. 6, 1864
Filtering water	Christopher Hall	Norfolk, Va.	Feb. 22, 1868
Filtering water	John Phillips	Philadelphia, Pa.	Aug. 27, 1836
Filtering water	George B. White	New York	July 7, 1839
Filtering water, and other liquids	James Barron, U.S.N. ..	Philadelphia, Pa.	Aug. 30, 1831
Filtering water, wine	Solo'n McCombs, Jos. Smith, & Benj. Gatlin ..	Baltimore, Md.	June '24, 1806
Filters	Thomas Bishop	Dobb's ferry, N. Y. ..	Dec. 31, 1843
Filter	Wm. Ballard, assignee of Royal E. House	New York, N. Y.	June 27, 1846
Filters and refrigerators	Joseph T. Craddock	Baltimore, Md.	Dec. 31, 1845
Filters for water	Wm. Kumbel, assignee of W. H. Jennison	New York, N. Y.	Feb. 20, 1846
Filtering water	Wm. Kumbel, assignee of W. H. Jennison	New York, N. Y.	Mar. 7, 1846
Fluids, measuring	James Bogardus	New York	Oct. 12, 1837
Fluids, retention and discharge of	Bradford Seymour	Westmoreland, N. Y. ..	Nov. 10, 1867
Flumes, for mills	Asa Messer	Providence, R. I.	Nov. 19, 1823
Flumes, for water wheels	Jabez B. Fletcher	Richmond, Maine	Feb. 16, 1835
Fount. liquor	John Douglas	New York	June 25, 1831
Fountain, design for	John Dutton	Village Green p.o., Pa. ..	Oct. 3, 1846
Funnels for fluids	Philip Apple	Philadelphia, Pa.	July 13, 1806
Funnels with vents	David Clark	W. Stockbridge, Mass. ..	April 9, 1810
Gate, flood	Jona. Lucas	Charleston, S. C.	Nov. 6, 1819
Gate, flood	Benjamin S. Hort	Georgetown, S. C.	Oct. 9, 1813
Gate, flume	Harvey Frink	Chautauque co., N. Y. ..	Feb. 25, 1866
Gate, flume, for water wheels	Wm. Buckminster	Frammingham, Mass.	April 25, 1836
Gate, liquor	Oliver H. and Chs. H. Bueh	Fall River, Mass.	Mar. 17, 1843
Gate, mode of shutting	Amos Bolton	Fauquier co., Va.	June 19, 1812
Gate, paddle	John F. King	Waterford, N. Y.	Nov. 29, 1836
Gate, paddle	Earl Trumbull	Little Falls, N. Y.	April 4, 1833
Gate, self-acting waste	Edwin Eastlack & Jo- seph A. Miller	Greenwich, N. J.	April 21, 1843
Gate, water, balance	William Mayer	Rome, N. Y.	Nov. 12, 1811
Gate, water, opening and shutting	Origen Packard	Wilmington, Vt.	Feb. 12, 1827
Gate, water, for penstocks	Henry Potes	Christianburg, Va.	Jan. 9, 1827
Hose, fire engine	James Boyd	Boston, Mass.	May 30, 1821

INVENTION OR DISCOVERY.	PATENTEE.	INVENTED.	PUBLISHED.
Hose, fire, stopping accidental breaches in.....	Ralph Bulkley.....	New York.....	May 8, 1840
Hose, from cloth and gum elastic.	Samuel D. Breed.....	Philadelphia, Pa.....	June 20, 1838
Hose, India rubber.....	Edwin M. Chaffee.....	Roxbury, Mass.....	Jan. 9, 1844
Hose, or leather tubes.....	Abraham L. Pennock and J. Sellers.....	Philadelphia, Pa.....	July 6, 1818
Hose, made of canvass.....	Samuel Green.....	New York.....	Mar. 28, 1792
Hose, suction.....	James Riley.....	Boston, Mass.....	Feb. 6, 1833
Hydrants.....	David Burt.....	Schenectady, N. Y.....	June 22, 1809
Hydrants.....	James Ewing.....	Philadelphia, Pa.....	Dec. 19, 1823
Hydrants.....	Thomas Gibson.....	Philadelphia, Pa.....	Dec. 13, 1823
Hydrants.....	Thos. W. Newton and Joseph H. Laming.....	Philadelphia, Pa.....	July 30, 1833
Hydrants.....	Jacob Stroop.....	Pittsburgh, Pa.....	Dec. 16, 1833
Hydrants.....	Jacob Stroop.....	Pittsburgh, Pa.....	Nov. 11, 1834
Hydrants *.....	S. T. Walker.....	Baltimore, Md.....	Nov. 26, 1835
Hydrants.....	S. T. Walker.....	Baltimore, Md.....	July 2, 1836
Hydrants.....	David Horne.....	Baltimore, Md.....	Mar. 31, 1836
Hydrants.....	Thomas T. Tasker.....	Philadelphia, Pa.....	July 11, 1842
Hydrants.....	John Lee Chapman.....	Baltimore, Md.....	Oct. 12, 1842
Hydrants.....	Thomas A. Davies.....	New York, N. Y.....	Mar. 12, 1843
Hydrants.....	S. C. Higbie.....	Oppenheim, N. Y.....	Sept. 1, 1843
Hydrants, construction of †.....	Robert K. Colvin.....	Columbia, Pa.....	July 20, 1843
Hydrants and fire plugs.....	John M. Jordan.....	Baltimore, Md.....	Sept. 8, 1838
Hydrants and fire plugs ‡.....	S. H. Davies.....	Cincinnati, Ohio.....	July 18, 1840
Hydrants, fountain.....	Lewis Gouley.....	Philadelphia, Pa.....	Aug. 1, 1823
Hydrants, valves for.....	Horatio H. C. Kelsey.....	New York, N. Y.....	Dec. 15, 1843
Hydraulic balance lever.....	Daniel Fisk.....	Springfield, N. Y.....	July 18, 1820
Hydraulic elevator.....	David Corey.....	New York.....	Aug. 31, 1827
Hydraulic elevator.....	James McCreery.....	Noblestown, Pa.....	Jan. 5, 1828
Hydraulic machine.....	Joshua Hathaway.....	Vermont.....	Oct. 29, 1794
Hydraulic machine.....	Barnabas Langdon.....	Vermont.....	Feb. 26, 1801
Hydraulic machine.....	John B. Aveille.....	South Carolina.....	Oct. 14, 1802
Hydraulic machine.....	Daniel Tomlinson.....	Brookfield, Conn.....	Mar. 27, 1805
Hydraulic machine.....	William Barker.....	Wilkesbarre, Pa.....	Aug. 26, 1809
Hydraulic machine.....	William Shultz.....	Philadelphia, Pa.....	May 26, 1812
Hydraulic machine.....	Charles Darmand.....	Georgetown, D. C.....	Aug. 7, 1817
Hydraulic machine.....	Joseph James.....	Lynganore, Md.....	Nov. 18, 1818
Hydraulic machine.....	Jer. Black.....	Northum'eri'd co., Pa.....	April 23, 1819
Hydraulic machine.....	James O. Conner.....	Bedford, Pa.....	May 29, 1824
Hydraulic machine.....	Jacob Reap.....	Kenawha, Va.....	Oct. 6, 1827
Hydraulic machine.....	Thomas Hutchings.....	Reading, Pa.....	May 7, 1834
Hydraulic machines.....	Louis Brunier.....	France.....	July 8, 1842
Hydraulic machine, for currents.....	John Clarke.....	New York.....	Dec. 31, 1793
Hydraulic machinery.....	Robert McCormick.....	Rockbridge co., Va.....	Oct. 1, 1830
Hydraulic machinery.....	Theophilus Somerby.....	Nantasket, Mass.....	Oct. 1, 1830
Hydrometer.....	Elijah Southworth.....	New York.....	Feb. 28, 1821
Hydrometer.....	Jos. Tucker and E. Dwelle.....	Boston, Mass.....	Dec. 23, 1823
Hydro-pneumatic apparatus for raising beer from casks.....	Richard Sealy.....	New York, N. Y.....	Aug. 31, 1844
Hydrostatic, aerostatic machinery.....	E. C. Genet.....	Albany, N. Y.....	Oct. 31, 1835
Hydrostatic or hydraulic press for pressing cotton.....	John Haupt.....	Forkland, Ala.....	Aug. 21, 1841
Hydrostatic paradox, applied to move machinery.....	Cadwalader D. Colden.....	New York.....	May 19, 1815
Hydrostatic paradox, applied to move machinery.....	Cadwalader D. Colden.....	New York.....	June 2, 1815
Hydrostatic and pneumatic machine, for propelling.....	Robert Mills and Henry B. Fernald.....	Washington, D.C., & Portland, Maine.....	Oct. 10, 1835
Hydrostatic press.....	Thomas Baxter.....	Petersburg, Va.....	April 13, 1836
Hydrostatic press.....	Edward Merrill.....	New Bedford, Mass.....	Mar. 26, 1838
Hydrostatic press, oil §.....	O. Badger and O. Lull.....	Otsego, N. Y.....	Aug. 9, 1832
Ice, application to conduit pipes.....	Henry Cunningham.....	Johnstown, N. Y.....	June 23, 1836

* Reissued July 1, 1836. † Additional improvement, Jan. 16, '45. ‡ Reissued Feb. 4, '43. § Reissued Oct. 5 '36.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	DATE.
Liquors, drawing and corking....	Keene A. Bille.....	New-York.....	Nov. 8, 1833
Liquors, mode of elevating.....	John A. Smith.....	New London, Conn.	Aug. 7, 1835
Measuring liquids, measures for..	John S. Tough.....	Baltimore, Md.....	July 23, 1835
Measuring and transferring liquids	Thomas W. Whiteley..	Patterson, N. J.....	Feb. 1, 1836
Molasses, &c., apparatus for draw- ing from casks.....	Daniel Hunsicker....	Hartleton, Pa.....	Mar. 7, 1846
Pipes.—See Class 2, 9, and 15.			
Pipes, aqueduct.....	Thomas B. Robinson..	Stockbridge, Mass..	Mar. 19, 1831
Pipes, aqueduct.....	Thomas B. Armstead..	Bloomfield, N. Y....	April 15, 1836
Pipes, conduit.....	Robert Ramsey.....	Hanover, N. H.....	June 24, 1836
Pipes, conduit.....	Elisha Putnam.....	Albany, N. Y.....	Dec. 31, 1816
Pipes, conduit.....	Elisha Putnam.....	Albany, N. Y.....	Nov. 18, 1818
Pipes, conduit.....	J. Clark and L. Crowell	Westminster, Va....	Dec. 18, 1818
Pipes, conduit, coupling.....	Uel. West.....	New York, N. Y....	July 23, 1842
Pipes, for fire engines.....	James Riley.....	Boston, Mass.....	Feb. 6, 1834
Pipes, fire, securing from frost...	David Lownes.....	Pennsylvania.....	July 21, 1833
Pipes, fire, testing.....	Theophilus Packard..	Sherburne, Mass....	April 29, 1838
Pipes, supply for aqueducts, con- struction of.....	John H. Thorndike..	Boston, Mass.....	July 1, 1844
Pipes, tubes.....	Joseph Putnam.....	Salem, Mass.....	Jan. 17, 1827
Pipes, tubes, for conveying water.	Andrew Coffman.....	Shenandoah co., Va.	Mar. 18, 1834
Pipes, water, coating.....	Jonathan Ball.....	New York, N. Y....	Dec. 15, 1843
Piston, for pumps.....	Peter A. Browne.....	Philadelphia, Pa....	Oct. 9, 1816
Piston, for pumps, working.....	David Whittier.....	Delfast, Maine.....	April 14, 1838
Pneumatic machine.....	David Lloyd.....	Cambria county, Pa.	Jan. 7, 1816
Power, obtaining, by certain fluids	Mark J. Brunel.....	London, England...	Mar. 30, 1827
Press, hydrostatic, (Bramah's)...	D. H. Mason and M. W. Baldwin.....	Philadelphia, Pa....	Dec. 2, 1829
Press, hydro-mechanical.....	John Beverly.....	Philadelphia, Pa....	Dec. 26, 1803
Pumps.....	Elisha Rigg.....	Pennsylvania.....	July 29, 1794
Pumps.....	Thomas Bourke.....	Pennsylvania.....	Nov. 16, 1796
Pumps.....	Jacob Perkins.....	Massachusetts.....	July 9, 1801
Pumps.....	John Clark.....	New York.....	May 19, 1803
Pumps.....	Daniel M. Miller.....	New York.....	Mar. 5, 1804
Pumps.....	Benjamin Folger.....	Hudson, N. Y.....	July 7, 1804
Pumps.....	William Rhodes.....	New York.....	May 16, 1808
Pumps.....	Abraham Horn.....	Easton, Pa.....	Jan. 6, 1809
Pumps.....	William Shultz.....	Baltimore, Md.....	June 24, 1809
Pumps.....	Jacob Canfield.....	Morristown, N. J....	June 28, 1809
Pumps.....	Royal Yeamans.....	Springfield, Mass..	May 28, 1810
Pumps.....	Pliny Upham.....	Brookfield, Mass....	Mar. 9, 1811
Pumps.....	Jonathan Evans.....	Whitestown, N. Y....	Jan. 6, 1812
Pumps.....	Jacob Perkins.....	Newburyport, Mass..	Mar. 23, 1813
Pumps.....	Thomas Nicholson and Samuel Gunn.....	Geneva, N. Y.....	Aug. 6, 1813
Pumps.....	E. B. Shammon.....	Scipio, N. Y.....	June 20, 1816
Pumps.....	Daniel W. Christman	New York.....	Feb. 8, 1817
Pumps.....	Thomas Nicholson..	Washington, D. C.	April 29, 1817
Pumps.....	John M. Dearborn..	Boston, Mass.....	May 3, 1817
Pumps.....	William P. Tilton.....	Boston, Mass.....	May 6, 1817
Pumps.....	Luke M. Leighton.....	Portsmouth, N. H....	Sept. 1, 1817
Pumps.....	William Purcell.....	New York.....	Nov. 1, 1817
Pumps.....	Daniel Updike.....	New York.....	Feb. 19, 1818
Pumps.....	William Hendricks..	New York.....	June 12, 1818
Pumps.....	James Barron.....	Norfolk, Va.....	Feb. 20, 1819
Pumps.....	Job L. Munson.....	New Haven, Conn..	April 26, 1819
Pumps.....	Robert Gray.....	Milton, Pa.....	Nov. 11, 1819
Pumps.....	John Babcock, jr....	Edmeston, N. Y....	May 6, 1825
Pumps.....	Philo C. Curtis.....	Utica, N. Y.....	May 22, 1835
Pumps.....	Sylvanus Russell.....	Olean, N. Y.....	Feb. 4, 1836
Pumps.....	Theodoric Brooks....	Rutland, N. Y.....	April 13, 1836
Pumps.....	J. Robinson and Luke Shaw.....	Bath, Maine.....	Feb. 1, 1827
Pumps.....	R. Wileman.....	East Hartford, Conn.	July 9, 1829

INVENTORS OR DISCOVERERS.	INVENTORS.	RESIDENCE.	WORK GRANTED.
Pumps.....	John W. Hillias.....	Baltimore, Md.....	Sept. 16, 1830
Pumps.....	Antoine Batby.....	New York.....	May 18, 1830
Pumps.....	Martin Mettee.....	Baltimore, Md.....	May 20, 1830
Pumps.....	J. Beckwith.....	Saratoga, N. Y.....	April 16, 1831
Pumps.....	Jesse Reed.....	Marshfield, Mass.....	Aug. 5, 1831
Pumps.....	Noble Phelps.....	Turin, N. Y.....	Oct. 20, 1831
Pumps.....	Moses Bucklin.....	Grafton, N. H.....	Oct. 25, 1832
Pumps.....	Martin Mettee.....	Baltimore, Md.....	Mar. 8, 1833
Pumps.....	Frederick Krieg.....	Baltimore, Md.....	Feb. 6, 1833
Pumps.....	Dudley L. Farnham.....	Philadelphia, Pa.....	Jan. 24, 1834
Pumps.....	Heinrich Bachman.....	Lancaster, Pa.....	April 2, 1835
Pumps.....	Amos Minor.....	Jordon, N. Y.....	July 7, 1835
Pumps.....	Joseph Redelsperger.....	Mansfield, N. J.....	Oct. 31, 1835
Pumps.....	J. F. Walker.....	Eaton, Pa.....	May 6, 1836
Pumps.....	Abner T. Mixwell.....	Oxford, N. J.....	June 30, 1836
Pumps.....	Joseph Smart.....	Enton, Pa.....	Feb. 3, 1836
Pumps.....	Jesse Reed.....	Marshfield, Mass.....	July 24, 1836
Pumps.....	Joseph Evans.....	Lebanon, Ohio.....	Nov. 9, 1836
Pump.....	Humphrey L. Hughes.....	Warren county, Va.....	June 29, 1839
Pump.....	James Pike and Wil- lard Fisk.....	Cumberland, R. I.....	Aug. 13, 1839
Pump.....	Peter P. and Daniel D. Campbell, assignees of Abraham T. Mix- sell.....	Oxford, N. J.....	Sept. 28, 1839
Pump.....	Lebbeus Caswell.....	Harrison, Maine.....	May 19, 1840
Pump.....	Joseph Evans.....	Lebanon, Ohio.....	May 25, 1840
Pump.....	Jesse Reed.....	Marshfield, Mass.....	April 16, 1841
Pump.....	William M. Wheeler.....	Liberty, Mo.....	May 15, 1841
Pump.....	Sidney S. Hogle.....	Lansingburg, N. Y.....	May 29, 1841
Pump.....	Chapman Warner.....	Lexington, Ky.....	Nov. 10, 1841
Pump.....	Joel Farnam.....	Stillwater, Mass.....	Nov. 16, 1841
Pumps.....	Augustus Thayer.....	Chatham, Vt.....	Feb. 1, 1842
Pumps.....	W. and B. Douglass.....	Middletown, Conn.....	Dec. 31, 1842
Pumps.....	William L. Jacobs.....	Lancaster, Pa.....	Sept. 23, 1842
Pumps.....	S. C. Higbie.....	Oppenheim, N. Y.....	Mar. 21, 1843
Pumps.....	T. Jefferson Wolfe.....	Baltimore, Md.....	Sept. 27, 1844
Pumps.....	Joseph H. Webster.....	St. Louis, Missouri.....	Feb. 28, 1845
Pumps.....	Frederick Walther.....	Winchester, Va.....	May 1, 1845
Pumps.....	David Hinman.....	Brunswick, Ohio.....	Oct. 24, 1846
Pump.....	S. R. Sharpe, assignor of F. B. Hyatt.....	Maysville, Ky.....	June 16, 1846
Pump.....	Chapman Warner.....	Louisville, Ky.....	July 7, 1846
Pumps, air.....	Timothy Claxton.....	Boston, Mass.....	June 7, 1834
Pumps, air.....	Charles Goodyear.....	Philadelphia, Pa.....	Mar. 30, 1835
Pumps, air, or ventilator.....	George Harley and John Sedgwick.....	Philadelphia, Pa.....	June 1, 1832
Pumps, air, and water, double.....	James Smallman.....	Philadelphia, Pa.....	Mar. 27, 1815
Pumps, air, and steam.—See Class 6.			
Pump, air.....	Joseph M. Wrightman.....	Boston, Mass.....	Nov. 10, 1841
Pumps, applying power to common	Noah Underwood.....	Baltimore, Md.....	July 17, 1828
Pump, atmospheric piston.....	David G. Colburn.....	Wilmington, Vt.....	Aug. 25, 1846
Pumps, balance wheel.....	James Josslyn.....	Hanover, Mass.....	July 25, 1809
Pumps, balance wheel.....	Lewis Schrack.....	Norristown, Pa.....	Dec. 8, 1809
Pumps, beer and cider.....	Richard Sealy.....	New York.....	May 6, 1825
Pumps, beer and soda water.....	Levi Pitkin.....	Rochester, N. Y.....	Oct. 11, 1828
Pump boxes.....	John Stickney.....	Baltimore, Md.....	May 1, 1804
Pump boxes.....	Israel P. Williams and S. G. Rea.....	Salem, Mass.....	Dec. 9, 1828
Pump and boxes.....	John C. Helle.....	Newport, R. I.....	Aug. 1, 1817
Pump boxes, elliptical valve.....	James Baker.....	Charlestown, Mass.....	May 9, 1817
Pump boxes, metallic, single valve	Isaac Scott.....	Boston, Mass.....	May 2, 1817
Pump bucket.....	David Coon.....	Mendon, N. Y.....	Nov. 28, 1829
Pump, cast iron.....	J. Reed and J. Reed.....	Plymouth, Mass.....	Nov. 19, 1832

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	DATE GRANTED.
Pump, cattle	Andrew Bailey	Jefferson, Ohio	Aug. 2, 1822
Pump, cattle	Shively Staddon	Greenwood, Pa.	April 2, 1822
Pump, centrifugal	W. D. Andrews	New York, N. Y.	Mar. 14, 1826
Pump, Chinese, chain	Jeremiah Black	Northumberland, Pa.	Aug. 2, 1822
Pump, city, supply	John L. Sullivan	New York	Dec. 28, 1822
Pump, double acting cylinder	Phelps Mix	Germantown, Pa.	Jan. 9, 1826
Pump, double piston	S. W. Allen	Geneva, N. Y.	July 21, 1831
Pump, double, preparing moulds for casting	Foster Henshaw	Brookfield, Mass.	June 29, 1830
Pump, drawing and forcing	John L. Sullivan	New York	Dec. 28, 1833
Pump, dry, bellows	Enoch Alden	Massachusetts	Nov. 15, 1803
Pump, elevating, grain, meal, &c.	John Ewing and David Dickey	Oxford, Pa.	Oct. 2, 1813
Pump, endless chain	J. A. Pitts and H. A. Pitts	Winthrop & Liver- more, Me.	April 28, 1834
Pump, fire engine	Joseph Newman	Baltimore, Md.	April 14, 1836
Pumps and fire engines	Benjamin T. Babbitt Shuter C. Higbee and Peter Plantz	Little Falls, N. Y. } Oppenheim, N. Y. }	Oct. 7, 1842
Pump, folding paddle	Spencer Thomas	Boston, Mass.	Oct. 10, 1817
Pump, forcing, double	Charles Colver	Champlain, N. Y.	April 1, 1806
Pump, forcing, double	Eleazer Cady, jr.	Chatham, N. Y.	Mar. 9, 1808
Pump, forcing, double	William Beach	Franklin, N. Y.	Feb. 19, 1811
Pump, forcing, double	Thomas Farris	Dutchess co., N. Y.	Feb. 20, 1811
Pump, forcing, double	Levi Gray	Otsego, N. Y.	Mar. 7, 1811
Pump, forcing, double	Francis Hameon	Easton, Pa.	Mar. 16, 1816
Pump, forcing, double	William Baker	Springfield, N. Y.	Dec. 31, 1819
Pump, forcing, double	Lena Gillett, adm'x of Samuel Gillett	Windsor, Ct.	April 6, 1820
Pump, forcing, double	D. L. Farnham	New York	Oct. 23, 1837
Pump, forcing, double	William Douglass	Middletown, Ct.	Aug. 20, 1835
Pump, forcing, double	Levi Newton	Alexander, N. Y.	Mar. 8, 1836
Pump, forcing, double	John G. White	Dryden, N. Y.	July 1, 1836
Pump, forcing	John Eveleth	Rhode Island	June 13, 1801
Pump, forcing	Aaron Taylor	Boston, Mass.	Oct. 4, 1805
Pump, forcing	Pliny Upham	Brookville, Mass.	Jan. 1, 1809
Pump, forcing	John Paddleford	Lebanon, N. Y.	May 6, 1823
Pump, forcing	Samuel Currey	Williamson, Tenn.	Jan. 3, 1825
Pump, forcing	Benjamin Lapham	Waterford, N. Y.	Nov. 19, 1833
Pump, forcing	James D. Egbert	Lansing, N. Y.	Sept. 22, 1834
Pump, forcing	Joel Farnam	Stillwater, N. Y.	Oct. 22, 1834
Pump, forcing	Benjamin Egbert	Lansing, N. Y.	Jan. 23, 1836
Pump, forcing	W. W. Leaser	Venice, N. Y.	Mar. 12, 1836
Pump, forcing	John F. Rodgers	Waterford, N. Y.	Mar. 30, 1836
Pump, forcing	Nathan Chapin	Penn Yan, N. Y.	Mar. 30, 1836
Pump, forcing, for fire engines	Eli Smith	Palmer, Mass.	Nov. 6, 1810
Pump, forcing, quadruple	Ira Ferris	Ellicott, N. Y.	Aug. 12, 1828
Pump, forcing, reverse	Levi Gray	Otsego, N. Y.	Mar. 7, 1811
Pump, forcing, and suction	Joshua Clark	Westminster, Vt.	Sept. 11, 1823
Pump, forcing, and suction	John F. Rogers	Waterford, N. Y.	Feb. 27, 1833
Pump, force for wells, constructing the parts	Thos. W. H. Moseley	Paris, Ky.	Sept. 30, 1830
Pump, force, double acting	Joel Farnam	Stillwater, N. Y.	Dec. 10, 1841
Pump, frictionless	Edward Whitfield	New York	June 2, 1836
Pump, frictionless	Charles V. Card	New Bedford, Mass.	Nov. 26, 1836
Pump, gauge	James D. Woodside	Washington, D. C.	July 14, 1834
Pump, horizontal	Luther Holland	Belchertown, Mass.	Mar. 28, 1810
Pump, horizontal	Luther Holland	Belchertown, Mass.	Sept. 10, 1811
Pump, impellant	Sol. Thayer	Massachusetts	June 9, 1801
Pump, labor saving	Daniel Smith	China, N. Y.	June 13, 1831
Pump, lifting	John Renfrew	Fayetteville, Pa.	June 16, 1846
Pump, liquor	Henry Rogers	Moravia, N. Y.	Sept. 17, 1842
Pump, for machinery	Liscomb Knapp	Brighton, Mass.	May 22, 1826
Pump, metallic	Jedediah Beckwith	Saratoga, N. Y.	Dec. 27, 1833

INVENTIONS OR DISCOVERIES.	PATENTERS.	LOCATED.	DATE ISSUED.
Pump, oblique.....	Jonathan Hunt.....	New York.....	June 7, 1808
Pump, package.....	John A. Smith.....	Windham, Ct.....	Feb. 3, 1820
Pump, pendulum, double bored.....	Atkinson Farrar.....	Montgomery, Pa.....	Dec. 5, 1809
Pump, pendulum, and cog.....	Bennet Lies.....	New York.....	Aug. 6, 1812
Pump, preventing water from freezing.....	Samuel Adams.....	Townsend, Mass.....	Mar. 11, 1837
Pump, rotary.....	Ebenezer R. Hale.....	Hyde Park, N. Y.....	July 14, 1830
Pump, rotary.....	Thomas Sutton.....	Norwich, Ct.....	Jan. 28, 1831
Pump, rotary.....	Elisha Hale.....	Hyde Park, N. Y.....	Aug. 3, 1833
Pump, rotary.....	Wm. C. Trowbridge.....	Southeast, N. Y.....	Jan. 27, 1835
Pump, rotary.....	Isaac Hall.....	Poughkeepsie, N. Y.....	April 22, 1835
Pump, rotary.....	David M. Walker.....	Cavendish, Vt.....	Aug. 15, 1835
Pump, rotary.....	C. Peters and B. Dean.....	Poughkeepsie, N. Y.....	Oct. 31, 1835
Pump, rotary suction.....	Samuel A. Lee.....	Boston, Mass.....	Sept. 4, 1841
Pump, sea motion.....	Bennet Lies.....	New York.....	Aug. 19, 1811
Pump, for ships and mines.....	John Stickney.....	Massachusetts.....	Nov. 29, 1799
Pump, for ships.....	George Clymer.....	Pennsylvania.....	Dec. 22, 1801
Pump, for ships.....	Andrew Henshaw and N. Harlow, jr.....	Bangor, Mass.....	Aug. 30, 1811
Pump, for ships.....	John B. Pell.....	New York.....	Oct. 31, 1829
Pump, for ships.....	David Gay.....	Bath, Me.....	Sept. 8, 1837
Pump, for ships.....	Thomas Odiorne.....	Portsmouth, N. H.....	Aug. 27, 1835
Pump, for ships, mode of working.....	Manuel Francis.....	Boston, Mass.....	July 7, 1829
Pump, spear for, horizontal, circular valve.....	Eben. Leman.....	Boston, Mass.....	May 23, 1817
Pump, spiral.....	Cotton Foss.....	Perry, Ohio.....	Aug. 4, 1832
Pump, spring.....	William Finn.....	Baltimore, Md.....	Feb. 13, 1806
Pump, stone, water tight joints.....	Abraham Van Vorhes.....	Hebardsville, Ohio.....	May 3, 1890
Pumping ships, pendulous bellows.....	Benjamin Wynkoop.....	Pennsylvania.....	June 26, 1797
Pumping ships, wheel power.....	S. Town & R. W. Oliphant.....	N. Granville, N. Y.....	April 8, 1826
Pumping ships, wind power.....	Thomas Brownell.....	New York.....	Mar. 23, 1827
Pump, suction.....	Daniel Watson.....	Plymouth, Mass.....	Mar. 4, 1808
Pump, suction.....	John Edwards.....	Urbana, Ohio.....	May 25, 1818
Pump, suction.....	Levi Gray.....	Springfield, N. Y.....	May 9, 1820
Pump, suction.....	Daniel Johnson.....	Boston, Mass.....	April 21, 1824
Pump, suction.....	Allen H. Mathes.....	Madisonville, Tenn.....	Dec. 31, 1833
Pump, suction.....	Elijah Whiton.....	Groton, Mass.....	Oct. 2, 1834
Pump, suction.....	Thomas C. Barton.....	Washington, N. J.....	Feb. 20, 1836
Pump, suction, and fire engine.....	Isaiah Jennings.....	Philadelphia, Pa.....	April 11, 1812
Pump, suction, and force.....	Abm. Kasslar.....	Canajoharie, N. Y.....	Oct. 28, 1837
Pump, suction, and force.....	Jona. Stevens.....	Newark, N. J.....	Dec. 20, 1837
Pump, suction, and force.....	James J. Rice.....	Salina, N. Y.....	Mar. 10, 1838
Pump, suction, and force.....	Andrew Bailey.....	Jefferson, Ohio.....	May 4, 1838
Pump, suction, and lifting.....	Elisha Tolles.....	Litchfield, Ct.....	Sept. 28, 1831
Pump, suction and force, double acting.....	Joel Farnam.....	Stillwater, N. Y.....	Dec. 14, 1841
Pump, tide, basin.....	George M. Seldon.....	Troy, N. Y.....	Mar. 10, 1828
Pump, universal.....	Apollo Kinsley.....	Connecticut.....	Oct. 26, 1799
Pump, valves for.....	Henry Heckman.....	Newburg, Pa.....	July 17, 1837
Pump, valves, elliptic.....	James Baker.....	Charlestown, Mass.....	Jan. 16, 1817
Pump, valve of.....	C. D. Van Allen.....	Petersburg, Va.....	July 8, 1841
Pump, valves and piston of.....	John Clark.....	Portsmouth, Va.....	Oct. 11, 1841
Pump, valves, spring or drop.....	Eli Kendall.....	Ashby, Mass.....	June 22, 1832
Pump, valves, wing.....	William Francis.....	Boston, Mass.....	July 11, 1818
Pump, ventilating.....	Rh. Robotham.....	New York.....	Oct. 10, 1861
Pump, vibrating.....	Sampson Davis.....	Derby, Vt.....	Feb. 25, 1836
Pump, and water pipe.....	Mark Reeve.....	Pennsylvania.....	Dec. 14, 1798
Pump, wind.....	James Kerr.....	Maury co, Tenn.....	Dec. 31, 1833
Pump, wind power.....	Heman Bronson.....	Kent, Ct.....	Mar. 8, 1820
Raising and forcing water.....	W. H. Johnson.....	Springfield, Ill.....	Mar. 21, 1846
Raising water.....	Mark J. Brunell.....	New York.....	April 27, 1798
Raising water.....	Ios. Humpley.....	New York.....	Jan. 10, 1799
Raising water.....	William Faris.....	Maryland.....	May 17, 1799

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Raising water.....	William Palmer.....	New York.....	Aug. 25, 1801
Raising water.....	Benjamin Cooley.....	Massachusetts.....	Feb. 1, 1803
Raising water.....	William Harrington.....	Paris, Ky.....	Aug. 28, 1804
Raising water.....	Seraphim Billing.....	Baltimore, Md.....	Nov. 7, 1805
Raising water.....	Samuel Currey.....	Williamson co., Ten.....	April 24, 1810
Raising water.....	Jacob Hartman.....	Lampeter, Pa.....	Mar. 31, 1814
Raising water.....	N. N. Destreham.....	Charles Parish, La.....	Dec. 13, 1821
Raising water.....	Social Rolph.....	Albany, N. Y.....	Nov. 16, 1822
Raising water.....	William Dabney.....	Richmond, Va.....	Nov. 20, 1824
Raising water.....	Scott Fickett.....	New York.....	June 11, 1825
Raising water.....	A. E. Lazell and Dan. Bloodgood.....	Poughkeepsie, N. Y.....	July 27, 1829
Raising water.....	Lenmon Parmelee.....	Poughkeepsie, N. Y.....	Oct. 1, 1830
Raising water.....	Levi Disbrow & John Sullivan.....	New York.....	Aug. 28, 1832
Raising water.....	Philip Tusing.....	Brock's Gap, Va.....	Nov. 7, 1832
Raising water.....	Joseph Turner.....	Poland, Me.....	May 6, 1836
Raising water.....	Jesse C. Wood.....	Ephrata, N. Y.....	June 22, 1836
Raising water.....	David L. Myers and Samuel Myers.....	Christianburg, Va.....	July 28, 1838
Raising water, apparatus for producing vacuum.	Eugene Ablon, ass'nee of Pierre Ravard.....	Paris, France.....	Dec. 17, 1840
Raising water, by atmospheric pressure.....	Samuel McCune.....	Wilmington, Ohio.....	Aug. 25, 1829
Raising water, conveying.....	David G. Colburn.....	Cayuga co., N. Y.....	May 12, 1834
Raising water for domes'c purposes	Liscomb Knapp.....	Brighton, N. Y.....	May 22, 1826
Raising water, endless chain buckets.....	John Dutton.....	Aston township, Pa.....	Oct. 9, 1841
Raising water, and forcing.....	Sam. Finlay, B. Morse and S. E. Morse.....	Charlestown, Mass.....	Oct. 3, 1817
Raising water, and forcing.....	Elisha Vance.....	Wilmington, Ohio.....	June 7, 1838
Raising water from fountains.....	John Manning.....	New Hampshire.....	April 10, 1798
Raising water, hydraulic wheels for	Pierre Desiré Henry.....	New Orleans, La.....	Jan. 9, 1841
Raising water for mills.....	Aaron Brookfield.....	New Jersey.....	Oct. 24, 1800
Raising water by revolving wheel	Henry Miller.....	Allenton, Pa.....	July 28, 1827
Raising water and sawing timber.	John Winter.....	Brutus, N. Y.....	Nov. 15, 1825
Raising water to set machinery in motion.....	David W. Hunt.....	Newburyport, Mass.....	June 12, 1835
Raising water by steam.....	William Baley.....	Nelson county, Ky.....	Feb. 4, 1817
Raising water by steam.....	James Ambler.....	Berlin, N. Y.....	May 29, 1819
Raising water by steam.....	George Fleming.....	Gouchland, Va.....	April 24, 1827
Raising water by steam.....	Joseph S. Fox.....	Otto, N. Y.....	April 5, 1828
Raising water by steam engine.....	David Colver.....	Deer Creek, Ohio.....	June 6, 1832
Raising water by successive pumps	L. H. Mosby.....	Powhattan co., Va.....	Feb. 15, 1829
Raising water for turning mills.....	William Mead.....	Pittsburgh, Pa.....	Nov. 19, 1833
Raising water by weight.....	William Bushnell and J. Altoffer.....	Harrisburg, Va.....	Aug. 30, 1821
Raising water by weight.....	David Hess.....	Shepardstown, Va.....	July 1, 1836
Raising water from wells.....	George Patterson.....	Philadelphia, Pa.....	Feb. 6, 1813
Raising water from wells.....	Elijah Willard.....	Egremont, Mass.....	Nov. 2, 1825
Raising water from wells.....	Jer. Dexter.....	Salisbury, Conn.....	Jan. 27, 1826
Raising water from wells.....	Elijah Willard.....	Egremont, Mass.....	Oct. 23, 1826
Raising water from wells.....	Isaac Wilbur.....	Madison, N. Y.....	Dec. 28, 1826
Raising water from wells.....	Samuel Smith.....	Mendon, N. Y.....	Aug. 20, 1828
Raising water from wells.....	Samuel Smith.....	Mendon, N. Y.....	Mar. 17, 1829
Raising water by wind.....	Samuel Morey.....	New Hampshire.....	April 11, 1795
Ram, hydraulic.....	J. Cerneau and S. S. Hallet.....	New York.....	Aug. 3, 1809
Ram, hydraulic*.....	Benjamin S. Benson.....	Harford, Md.....	Dec. 26, 1845
Ram, water.....	Erastus W. Ellsworth.....	East Windsor, Ct.....	Dec. 6, 1845
Soda apparatus.—See Class 4.			
Soda fountain.—See Class 4.			
Sparger, self-acting, for distributing water upon malt in the mash-tub	H. Jones Brook and Francis B. Longmire.....	Philadelphia, Pa.....	May 8, 1840

* Antedated Aug. 5, 1845; additional improvement Oct. 22, 1846.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Stoppers and plugs	Matthew Vassar	Poughkeepsie, N. Y.	June 27, 1846
Stops, elastic water, for checking the force of water in pipes	Horatio Allen	New York, N. Y. . . .	Oct. 25, 1843
Syphons, constructing, and mode of charging them	George Johnson	New York	Dec. 23, 1841
Syphon, for drawing oil	James Gray	Fredericksburg, Va.	April 25, 1838
Tide mills	Jona. Dickerson	Morris county, N. J.	July 30, 1791
Tide mills	John P. Swain and Jacob Skinner	Roxbury, Mass.	May 17, 1810
Tide mills	Francis Rittal	Lincoln, Mass.	Jan. 28, 1815
Tide mills	Josiah Cleaveland	St. Mary's co., Md. . .	Oct. 22, 1816
Tide mills	Robert Spedden	Talbot, Md.	Aug. 1, 1827
Tide mills, and current	Henry Allen	Fayette county, Ten.	Dec. 30, 1820
Tide mills, and current	George H. D. Gray ..	Southampton, Va. . .	Sept. 25, 1822
Tide mills, and current	Jos. Wallace	Hartford, Ky.	Sept. 11, 1829
Tide mills, and current	James Bennett	Vigo county, Ind. . .	Aug. 10, 1832
Tide motion applied to machinery	John Staple, jr.	New York	Mar. 18, 1803
Tide power	Henry M. Western ..	New York	Dec. 23, 1829
Tide power	Henry B. Fernald ..	Portland, Maine . . .	Aug. 17, 1835
Ventilating machine	George Harley & John Sedgwick	Philadelphia, Pa.	June 1, 1832
Ventilator for rooms	James M. Burton	Salem, Ga.	Aug. 17, 1839
Water and animal power	John A. Wiszt	Philadelphia, Pa.	May 10, 1844
Water, applying to saw mills. . . .	William Kendall	Fairfield, Maine.	Jan. 12, 1831
Water, applying	J. Hinds, M. B. Ball, and S. Pike	Troy, N. Y.	May 14, 1836
Water blast	Joseph Ruggles	New Milford, Conn.	June 6, 1811
Water, conveying	Samuel Hant	Baltimore, Md.	Mar. 31, 1836
Water, cooling, and other fluids. . .	William Thornton . .	Washington, D. C. . .	July 31, 1827
Water, drawing from forebays and discharging on wheels	J. P. Espy & A. Young	Philadelphia, Pa.	Sept. 11, 1829
Water, drawing from wells	Elijah Willard	Egremont, Mass.	Nov. 2, 1825
Water, drawing from wells	Jehiel J. Farrand ..	Port Byron, N. Y. . .	Jan. 7, 1846
Water, elevating, and other liquids	Charles R. Alsop	Middletown, Conn. . .	Jan. 21, 1833
Water, mode of applying to propel machinery	William Baker	Utica, N. Y.	May 19, 1840
Water, mode of supplying houses	William Bryant	Davidson co., Tenn.	Oct. 25, 1832
Water power	Amos Thayer	Albany, N. Y.	May 1, 1818
Water power	Ebenezer Bassford ..	Jay, Maine.	July 10, 1834
Water power, application to mills	Dart and Wood	Fabius, N. Y.	Sept. 9, 1835
Water power, application to lever beam	John Abbott	Reading, Mass.	Nov. 19, 1833
Water power, steam, &c., applied to mills	Jehiel W. Dart and William Webster ..	Truxton, N. Y.	Jan. 21, 1831
Water power, economy of.	Timothy P. Anderson	Hardwick, Mass. . . .	Dec. 23, 1833
Water power, increasing, by atmospheric pressure	Samuel L. Holmes ..	West Chester, N. Y.	Dec. 8, 1828
Water power to machinery	Meredith Mallory ..	Benton, N. Y.	Mar. 3, 1817
Water power to mills	Josiah W. Newbury .	Luzerne, Pa.	June 28, 1815
Water power to a number of wheels, &c.	Henry Crenshaw	Anderson district, SC	Dec. 28, 1832
Water power, saving	Aaron Foot	Williamstown, Mass	Jan. 4, 1831
Water pressure, for propelling machinery	George M. Gibbs	Williams' Parish NC	Mar. 10, 1828
Water, purifying	Samuel Griffith	Rensselaer co., N. Y.	Feb. 1, 1817
Water power, supplying to building to extinguish fires.	Lonson Rush, adm'r of Isaac Lowell, dec'd	Erie county, } N. Y. Pendleton, }	Oct. 16, 1840
Water, regulating the supply of. .	John Cochrane	Newark, N. J.	July 13, 1844
Water, steam, and wind power . .	Isaac Garretson	Belle Fontaine, Ohio	Mar. 25, 1826
Water tank, floating	Wm. Kearney & John McArdle	Brooklyn, N. Y.	Feb. 5, 1833
Watering machine, for cattle . . .	Moses Smith	Massachusetts	Mar. 16, 1804
Watering machine, for cattle . . .	Adolphus Allen	Troy, Pa.	July 10, 1824
Water wheel	Ephraim Hubbel	Middlebury, Vt.	May 1, 1806

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Water wheel	Simon Willard, jr.	Hudson, N. Y.	Dec. 1, 1807
Water wheel	Jona. Miner.	Saratoga, N. Y.	April 2, 1810
Water wheel	Aaron Reuck.	Chillicothe, Ohio.	Dec. 5, 1810
Water wheel	Mark Andrews.	Kennebec, Mass.	May 4, 1811
Water wheel	Abm. Sands.	Georgetown, D. C.	Aug. 28, 1811
Water wheel	Jos. Atkinson.	Amherst, Mass.	Sept. 5, 1811
Water wheel	Elisha Mack.	Sheffield, Mass.	Nov. 2, 1811
Water wheel	David Loring.	Canandaigua, N. Y.	Dec. 31, 1813
Water wheel	David Cooper.	Jericho, N. Y.	May 12, 1814
Water wheel	George Peck.	Whitestown, N. Y.	April 26, 1815
Water wheel	Benjamin Thomas.	Washington, D. C.	Mar. 20, 1817
Water wheel	Ira Griswold.	Granville, Conn.	April 16, 1817
Water wheel	Amos Thayer.	Albany, N. Y.	July 7, 1817
Water wheel	Charles A. Busby.	New York.	Oct. 25, 1817
Water wheel	John Evans.	Davies co., Ind.	April 21, 1818
Water wheel	Amos Thayer.	Albany, N. Y.	May 1, 1818
Water wheel	John Edwards.	Urbana, Ohio.	May 25, 1818
Water wheel	Thomas Eales.	Newbury, Vt.	April 29, 1819
Water wheel	Elisha Hale.	Baltimore, Md.	July 5, 1820
Water wheel	David Beauchamp.	Elizabethtown, Va.	Oct. 10, 1820
Water wheel	Charles Goddard.	Sabine Hall, Va.	Sept. 27, 1821
Water wheel	Adolphus Allen.	Troy, Pa.	Feb. 8, 1823
Water wheel	John D. Wilson.	Coridon, Ind.	June 7, 1827
Water wheel	Jos. Torrey.	Ravenna, Ohio.	Feb. 28, 1828
Water wheel	John Bell.	Sycamore town'p, O.	May 9, 1828
Water wheel	Abel Greenleaf.	Mexico, N. Y.	June 5, 1828
Water wheel	Orpheus Thompson.	Jericho, Vt.	Dec. 6, 1828
Water wheel	John R. Wheeler.	Pittsford, N. Y.	Mar. 15, 1830
Water wheel	Paul Boynton.	Ogdensburg, N. Y.	April 20, 1830
Water wheel	James Johnson.	Fairbanks town'p, In.	Oct. 1, 1830
Water wheel	Clark Willson.	Swanzy, N. H.	Oct. 1, 1830
Water wheel	Henry Averill.	Richland, N. Y.	Oct. 21, 1830
Water wheel	Martin Coney.	Portland, N. Y.	April 12, 1831
Water wheel	James McConnell.	Shenango, Pa.	Dec. 13, 1832
Water wheel	John Moffit.	Richmond Ohio.	April 27, 1832
Water wheel	Theodorus Loomis.	Athens, Pa.	Mar. 14, 1833
Water wheel	Andrew M. Braley and John L. Dryer.	Montgomery co., Ind.	May 7, 1833
Water wheel	Ebenezer A. Lester.	Boston, Mass.	Sept. 13, 1833
Water wheel	Ezekiel W. McGuier and Joel Dewey, jr.	Waterford, N. Y.	Sept. 14, 1833
Water wheel	Isaac Van Gorder.	Warren, Ohio.	Dec. 16, 1833
Water wheel	Zerah Blakely.	Wilkeville, Ohio.	Dec. 31, 1833
Water wheel	Elisha Bushnell.	Sodus, N. Y.	Jan. 30, 1834
Water wheel	William Shepard.	Gibson township, Pa.	Feb. 12, 1834
Water wheel	Benjamin Dugdale.	Trenton, N. J.	May 15, 1834
Water wheel	Isaac Harrison.	Middletown, Va.	Jan. 31, 1834
Water wheel	David H. Gilbert.	Dorchester, Mass.	Feb. 28, 1834
Water wheel	Henry Averill.	Richland, N. Y.	June 18, 1834
Water wheel	Garet G. Heermance.	Coxsackie, N. Y.	Sept. 30, 1834
Water wheel	Robert Eastman.	Concord, N. H.	Mar. 11, 1835
Water wheel	Alvin Darling & Bar- ton Darling.	Billingham, Mass.	April 3, 1835
Water wheel	William Merrill.	Randolph, Ohio.	May 16, 1835
Water wheel	Isaac Powell.	Lawrence, N. Y.	July 17, 1835
Water wheel	William L. Elgac.	Winchester, N. H.	Feb. 10, 1836
Water wheel	Frederick Wingate.	Augusta, Maine.	Mar. 4, 1836
Water wheel	Abraham Straub.	Milton, Pa.	Mar. 12, 1836
Water wheel	Carey S. Mercer.	Franklin, Md.	Mar. 30, 1836
Water wheel	J. T. Towne.	Mount Morris, N. Y.	April 11, 1836
Water wheel	William Hitchcock.	Spencer, N. Y.	May 23, 1836
Water wheel	Henry Allen.	Fayetteville, Tenn.	June 2, 1836
Water wheel	Orson Waldo.	Newark, N. Y.	June 25, 1836
Water wheel	Charles Kenzie.	Troy, N. Y.	July 1, 1836

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Water wheel	Samuel Garrett	Loudonville, Ohio ..	July 2, 1836
Water wheel	William F. Brown	Augusta, Maine	July 2, 1836
Water wheel	Nehemiah P. Stanton ..	Syracuse, N. Y.	May 22, 1837
Water wheel	Clayton Parker and R. W. Engle	Wayne township, O. ..	July 31, 1837
Water wheel	Charles Goulding	Mobile, Alabama	Dec. 15, 1837
Water wheel	John W. Moon	Roxbury, N. Y.	Feb. 15, 1838
Water wheel	John R. Wheeler	Seneca Falls, N. Y. ...	April 14, 1838
Water wheel	John Mumma	West Alexandria, O. ..	April 28, 1838
Water wheel	Samuel B. Howd	Geneva, N. Y.	July 26, 1838
Water wheel	William Hatfield	Zanesville, Ohio	Dec. 31, 1838
Water wheel	Thomas N. Whitcomb & Jos. M. Whitcomb ..	Grafton, Vt.	Dec. 31, 1838
Water wheel	Eliza Martineau, ad'x of Jno. Martineau, de'd ..	Elbridge, N. Y.	April 18, 1839
Water wheel	William C. Bishop	Ovid, N. Y.	Sept. 5, 1839
Water wheel	Timothy Rose	New York	Oct. 1 st , 1839
Water wheel	Edward Robbins, jr. & William Ashby	Bordentown, N. J. ...	Mar. 25, 1840
Water wheel	Joseph Hanchett	Coldwater, Mich.	July 15, 1840
Water wheel	Nelson Johnson	Triangle, N. Y.	June 22, 1841
Water wheel	Clark Lewis	Syracuse, N. Y.	July 16, 1841
Water wheel	Jesse Taylor	Aurelius, N. Y.	Sept. 11, 1841
Water wheel	John G. Garretson	Muhlenburg, Ohio	Oct. 11, 1841
Water wheel	John L. Smith	Salina, N. Y.	Dec. 10, 1841
Water wheel	Samuel L. Valentine	Bangor, Maine	Dec. 31, 1842
Water wheel	William Lamb	Whitestown, N. Y. ...	April 11, 1842
Water wheel	Lemuel W. and Geo. W. Blake	Pepperell, Mass.	April 21, 1842
Water wheel	Samuel B. Howd	Lyons, N. Y.	April 30, 1842
Water wheel	Samuel Diehl	Manallen towns'p, Pa. ..	May 4, 1842
Water wheel	Abijah Woodward	Swansey, N. H.	May 12, 1842
Water wheel	Amasa B. Beckwith	Bath, N. Y.	July 2, 1842
Water wheel	Reuben Rich	Albion, N. Y.	July 8, 1842
Water wheel	Eli B. Lansing	Wheeling, Indiana	July 16, 1842
Water wheel	Jesse Taylor	Auburn, N. Y.	July 20, 1842
Water wheel	Samuel L. Valentine	Bangor, Maine	July 23, 1842
Water wheel	Joseph Durkee	Binghampton, N. Y. ...	Aug. 25, 1842
Water wheel	Stiles Munger	Shawangunk, N. Y. ...	Feb. 10, 1843
Water wheel	Philip Wells	Milford, Michigan	Mar. 4, 1843
Water wheel	Samuel Hopper	Lewistown, Pa.	Mar. 21, 1843
Water wheel	Chadiah Aylesworth	Bainbridge, N. Y.	June 24, 1843
Water wheel*	James Finlay, assignee of Whitlaw and Stuart ..	Coldspring, N. Y. ...	July 3, 1843
Water wheel	Daniel H. Parsons	Chester, Ohio	July 12, 1843
Water wheel	John Gildwell	Northfield, Mass.	Aug. 4, 1843
Water wheel	Daniel Stearns	Rome, N. Y.	Sept. 14, 1843
Water wheel	Amasa B. Beckwith	Bath, N. Y.	Oct. 20, 1843
Water wheel	Hiram Ferguson	Richland, N. Y.	Mar. 20, 1844
Water wheel	Nelson Johnson	Rathboneville, N. Y. ...	Mar. 26, 1844
Water wheel	Albert Stimpson	Rockingham, Vt.	April 25, 1844
Water wheel	Daniel Weaver	McKeansburg, Pa.	June 10, 1844
Water wheel	David Putney	Redbank, Pa.	Aug. 12, 1844
Water wheel	Roswell Cook	Elkland, Pa.	Sept. 14, 1844
Water wheel	J. D. Robinson	Peoria, Ill.	Oct. 24, 1844
Water wheel	Samuel L. Valentine	Bangor, Maine	Dec. 12, 1844
Water wheel	Theodore R. Timby	Cato Four Corners, N. Y.	Sept. 27, 1844
Water wheel†	James Gardner	South Lee, Mass.	Jan. 16, 1845
Water wheel	Chadiah Aylesworth	Bainbridge, N. Y.	Mar. 21, 1845
Water wheel	John J. Springsteen	Oswego, N. Y.	May 16, 1845
Water wheel	James Leffel	Springfield, Ohio	May 21, 1845
Water wheel	Theodore R. Timby	Cato 4 Corners, N. Y. ...	June 7, 1845

* Date of patent in England, Sept. 23, 1841.

† Antedated July 16, 1844.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Water wheel.....	R. C. Grant.....	Pomeroy, Ohio.....	July 26, 1848
Water wheel*.....	William Dripps.....	Coatesville, Pa.....	Nov. 26, 1845
Water wheel.....	John Mecay.....	Millsborough, Pa.....	Dec. 26, 1848
Water wheel.....	J. K. Millard.....	Town Hill, Pa.....	May 9, 1848
Water wheel.....	Christopher Hand.....	Port Elizabeth, N. J.....	May 16, 1846
Water wheel.....	Elisha Hale.....	Newark, N. J.....	Nov. 14, 1846
Water wheel.....	F. P. Haviland and E. Tuttle.....	Waterville, Maine.....	May 28, 1846
Water wheel, &c., adjusting boxes	Charles Joley.....	New York, N. Y.....	Feb. 7, 1842
Water wheel, and applying water to	Samuel Morey.....	Boston, Mass.....	July 14, 1815
Water wheel, and applying water to	Rob. and T. McCulloch	Albemarle co., Va.....	May 26, 1827
Water wheel, and applying water to	William Kendall.....	Fairfield, Maine.....	Jan. 12, 1831
Water wheel, and applying water to	Joseph Michenor.....	Clinton, Ohio.....	Mar. 9, 1831
Water wheel, and applying water to	Joel Eastman.....	Bath, N. H.....	Sept. 28, 1831
Water wheel, and applying water to	Richard Walker.....	Milton, N. H.....	Mar. 12, 1833
Water wheel, and applying water, wind, or steam.....	Luther Copeley.....	New Lebanon, N. Y.....	May 15, 1834
Water wheel, buckets for.....	William M. Eldridge..	Philadelphia, Pa.....	Mar. 20, 1834
Water wheel, bucket, spouts for admitting water on.....	Ira Staubrough.....	Arcadia, N. Y.....	Nov. 25, 1841
Water wheel, canal, race.....	Arthur Henrie.....	Miami, Ohio.....	Oct. 28, 1818
Water wheel, cast iron, and sluice	James Humiston, jr.....	Wallingford, Conn.....	May 10, 1805
Water wheel, and casting.....	Calvin Wing.....	Gardiner, Maine.....	Oct. 22, 1830
Water wheel, chain action.....	Sanford Reynolds.....	Pitcher, N. Y.....	Dec. 15, 1832
Water wheel, chain bucket.....	John Dutton, jr.....	Ashton, Pa.....	Feb. 26, 1840
Water wheel, chain paddles.....	Davidson Myers.....	Benton, Mo.....	Sept. 4, 1832
Water wheel, combined.....	Emerson G. Covell.....	Glenn's Falls, N. Y.....	Feb. 20, 1844
Water wheel, conical.....	Roswell Wilcox.....	Franklin co., Ohio.....	April 19, 1826
Water wheel, conical percussion..	James Denison.....	LANIER T'NSHIP, Ohio.....	April 25, 1846
Water wheel, current.....	Warren P. Wing.....	Greenwich, Mass.....	Sept. 22, 1837
Water wheel, current.....	Noahdiah W. Hubbard	Randolph, Ohio.....	April 2, 1841
Water wheel, current.....	William Miles.....	Boonsborough, Md.....	Oct. 26, 1842
Water wheel, current.....	John Carnagy.....	Tully, Mo.....	April 10, 1844
Water wheel, current or tide.....	F. A. Southworth.....	St. Louis, Mo.....	Jan. 28, 1840
Water wheel, current, raising and lowering.....	Charles F. Paine.....	Winslow, Maine.....	June 29, 1833
Water wheel, curved tube, for steam engine.—See Steam Engine, Class 6.	Lewis Waterbury and Talmage Waterbury	Malta, N. Y.....	April 12, 1834
Water wheel, double centre.....	William March.....	Sand Bank, N. Y.....	July 14, 1846
Water wheel, elevating water.....	William Smith.....	Gloucester, N. J.....	Aug. 12, 1808
Water wheel, float.....	Stacy Costill.....	Philadelphia, Pa.....	Oct. 17, 1827
Water wheel, floating.....	John Owings.....	Baltimore, Md.....	Sept. 9, 1816
Water wheel, floating valves.....	Israel J. Richardson..	Geneva, N. Y.....	Sept. 26, 1816
Water wheel, with floats working upon hinges.....	Joel Eastman.....	Bath, N. H.....	Feb. 18, 1831
Water wheel, flume.....	Walter Brewster.....	Connecticut.....	June 7, 1798
Water wheel, and flume.....	Asa Messer.....	Providence, R. I.....	May 18, 1826
Water wheel, and flume.....	Hiram Munger.....	Chickopee, Mass.....	Nov. 10, 1846
Water wheel, flutter, applying water to.....	James Stewart.....	Robertson co., Tenn.....	Oct. 24, 1828
Water wheel, flutter, applying water to.....	E. B. Pritchard.....	Scriven county, Ga.....	May 31, 1830
Water wheel, flutter, applying water on.....	Jarvis Smith.....	Queen's co., N. Y.....	July 1, 1817
Water wheel, with folding ladle boards.....	Thomas Winslow.....	Jay, Maine.....	Oct. 25, 1832
Water wheels, head of water applying.....	D. M. Kenzie, M. L. Barber, S. Dean, and J. McNaughton....	Caledonia, N. Y.....	June 19, 1826
Water wheel, hinged.....	Matthew D. Brown.....	Mason county, Va.....	Dec. 19, 1828
Water wheel, horizontal.....	James Macomb.....	Princeton, N. J.....	Aug. 26, 1791
Water wheel, horizontal.....	Ezekiel Reed.....	Massachusetts.....	Feb. 14, 1799*
Water wheel, horizontal.....	David Parmelee.....	Redding, Conn.....	Nov. 20, 1809

* Antedated May 26, 1845.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Water wheel, horizontal.....	John Osborn, jr.....	Litchfield, Conn.....	May 29, 1813
Water wheel, horizontal.....	William Cornwell.....	Accomack, Va.....	Dec. 15, 1814
Water wheel, horizontal.....	James Wood.....	Mount Pleasant, N. Y.....	June 19, 1815
Water wheel, horizontal.....	Richard A. Donaldson and Jos. L. Wheeler	Newark, N. J.....	Sept. 25, 1815
Water wheel, horizontal.....	Silas Dalie.....	Cumberland, Mass.....	May 28, 1816
Water wheel, horizontal.....	Horace Howard.....	Wooster, Ohio.....	Dec. 26, 1821
Water wheel, horizontal.....	Ebenezer Thompson.....	Manchester, N. Y.....	Mar. 24, 1825
Water wheel, horizontal.....	O. Lathan, L. Bennett, and J. Green.....	Oneida county, N. Y.....	May 28, 1825
Water wheel, horizontal.....	Abraham Lippitt.....	Windsor, Ohio.....	Nov. 2, 1825
Water wheel, horizontal.....	Shelden Stoddards.....	Jackson township, Pa.....	May 28, 1832
Water wheel, horizontal.....	Asahel Baron.....	Windsor, N. Y.....	June 4, 1832
Water wheel, horizontal.....	John Nuckolls and So- lomon P. Wheeler..	Bolivar, Tenn.....	June 22, 1832
Water wheel, horizontal.....	Chapman Warner.....	Oxford, N. J.....	Sept. 22, 1837
Water wheel, horizontal.....	Samuel Curtis.....	Eagle, N. Y.....	Dec. 15, 1837
Water wheel, horizontal.....	George Deming.....	Burlington, Vt.....	July 22, 1819
Water wheel, horizontal, curb, cast iron.....	James Pilling.....	Waterford, N. Y.....	Feb. 3, 1834
Water wheel, horizontal pedal.....	J. J. Giraud.....	Baltimore, Md.....	Feb. 3, 1831
Water wheel, horizontal, and per- pendicular.....	William Purnell.....	Giles co., W. Tenn.....	Jan. 10, 1817
Water wheel, inclined.....	John Palmer.....	Cincinnati, Ohio.....	Dec. 29, 1818
Water wheel, inclined.....	William H. Squires and Coral C. White.....	Ledyard, N. Y.....	Feb. 5, 1831
Water wheel, inclined.....	Cotton Foss.....	Perry, Ohio.....	Aug. 4, 1832
Water wheel, inclined.....	James Wood.....	La Grange, Tenn.....	Feb. 26, 1833
Water wheel, inclined.....	Thomas Pierce.....	Hartwick, N. Y.....	May 2, 1835
Water wheel, inclined.....	Abraham Baker.....	Dalton, Ohio.....	Sept. 23, 1843
Water wheel, inclined.....	John T. Gilmore.....	Fayetteville, N. C.....	Dec. 31, 1842
Water wheel, iron.....	P. J. Schuyler and E. D. Hitchcock.....	Stillwater, N. Y.....	Dec. 20, 1823
Water wheel, letting on water....	Asa Danielson.....	Otsego, N. Y.....	May 16, 1815
Water wheel, letting on water....	Samuel Sperry.....	Nashville, Tenn.....	Nov. 9, 1824
Water wheel, letting on water....	Thomas Key.....	Henry county, Ga.....	July 18, 1826
Water wheel, letting on water....	Jacob Ammon.....	Rockingham, Va.....	June 8, 1827
Water wheel, letting on water....	Michael Hildebrand.....	McMinn co., Tenn.....	Nov. 10, 1827
Water wheel, letting on water....	Samuel Curtis.....	Eagle, N. Y.....	Sept. 28, 1837
Water wheel, letting the water on.	Thomas Ruble.....	St. Mary's, Ind.....	Aug. 29, 1839
Water wheel, mill, (water mill)...	Samuel Bronwer.....	New York.....	Nov. 27, 1812
Water wheel, mill, (water mill)...	Jacob Perkins.....	Newburyport, Mass.....	June 26, 1813
Water wheel, mill, (water mill)...	John Owings.....	Baltimore, Md.....	Jan. 25, 1814
Water wheel, for mills and boats.	Paul Boynton.....	Ogdensburg, N. Y.....	April 21, 1829
Water wheel, mill, or machine....	Luther Copeley.....	New Lebanon, N. Y.....	May 15, 1834
Water wheel, oblique.....	Ralph Bulkley.....	New York.....	Aug. 7, 1821
Water wheel, overshot.....	Richard Berrian.....	New York.....	Feb. 13, 1809
Water wheel, overshot.....	John Green, sen.....	Virginia.....	Mar. 5, 1816
Water wheel, overshot, bucket for	Dean S. Howard.....	Lyonsdale, N. Y.....	Feb. 16, 1831
Water wheel, and paddle.....	Benjamin Howard.....	Worcester, Mass.....	June 11, 1829
Water wheel, penstocks for.....	Nelson Johnson.....	Triangle, N. Y.....	April 15, 1829
Water wheel, perpetual.....	James Widdifield.....	Philadelphia, Pa.....	April 21, 1817
Water wheel, propelling.....	Aretas A. Wilder.....	Warsaw, N. Y.....	Mar. 8, 1836
Water wheel, propelling boats*..	William Kelley.....	Pittsburg, Pa.....	July 12, 1834
Water wheel, reacting.....	Joel Farnam.....	Oswego, N. Y.....	Nov. 23, 1808
Water wheel, reacting.....	John W. Henderson and John Clayford.	Millburne, Maine.....	April 14, 1830
Water wheel, reacting.....	Calvin Wing.....	Gardiner, Maine.....	Oct. 22, 1830
Water wheel, reacting.....	John Turner.....	Augusta, Me.....	Jan. 18, 1831
Water wheel, reacting.....	Jos. C. Strobe.....	E. Bradford, Pa.....	Feb. 8, 1831
Water wheel, reacting.....	Geo. W. Henderson & Jos. Russel.....	Millburne, Me.....	Sept. 22, 1832
Water wheel, reacting.....	Gideon Hotchkiss.....	Windsor, N. Y.....	Nov. 6, 1832
Water wheel, reacting.....	Hazard Lewis.....	Binghamton, N. Y.....	Jan. 7, 1833

* Reissued November 17, 1834.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Water wheel, reacting*.....	John Ambler, jr.....	Waterford, N. Y.....	Feb. 2, 1838
Water wheel, reacting.....	Robert Eastman.....	Concord, N. H.....	Mar. 11, 1838
Water wheel, reacting.....	Israel S. Savage.....	Waterville, Me.....	April 12, 1838
Water wheel, reacting.....	John L. St. John.....	Canajoharie, N. Y.....	Sept. 16, 1834
Water wheel, reacting.....	John B. McCord.....	Galesna, Ill.....	May 16, 1835
Water wheel, reacting.....	Gideon Hotchkiss.....	Windsor, N. Y.....	Jan. 9, 1837
Water wheel, reacting.....	Nelson Johnson.....	Erwin Centre, N. Y.....	Nov. 23, 1837
Water wheel, reacting.....	Nelson Johnson.....	Erwin Centre, N. Y.....	May 30, 1838
Water wheel, reaction.....	Eau Whitney, Jacob Whitney, and Wil- liam F. Card.....	Burns, N. Y.....	June 11, 1842
Water wheel, reaction.....	Orin W. Seely, (as- signee of Joshua Evered.....	Sodus, N. Y.....	July 30, 1845
Water wheel, reaction.....	Abner Chapman.....	Fort Miller Bridge, N. Y.....	July 30, 1845
Water wheel, reaction.....	Ralph Summers.....	Seneca Falls, N. H.....	April 26, 1846
Water wheel, reacting, lever.....	Luther Davis.....	Northampton, Mass.....	Nov. 4, 1825
Water wheel, reacting, double power.....	William L. Eldredge.....	Philadelphia, Pa.....	Mar. 20, 1834
Water wheel, reaction, moulding preparatory to casting.....	Stephen Parsons.....	Edgecomb, Me.....	April 18, 1839
Water wheel, reaction and percus- sion†.....	Zebulon Parker (and Robert McKelvey, in trust for the heirs at law of Austin Parker Nathaniel F. Hodges Archibald Bryce.....	Ohio.....	Oct. 19, 1829
Water wheel, reaction.....	Nathaniel F. Hodges.....	Corning, N. Y.....	July 16, 1841
Water wheel, reaction.....	Archibald Bryce.....	Campbelton, N. Y.....	Oct. 16, 1840
Water wheel, &c., regulating the motion of.....	Nathan Scholfield.....	Montville, Ct.....	Feb. 11, 1833
Water wheel, &c., regulating the motion of.....	Nathan Scholfield.....	Norwich, Ct.....	May 17, 1836
Water wheel, relieving from back water.....	D. Benedict.....	Fabius, N. Y.....	May 10, 1826
Water wheel, rolling tub.....	Samuel Bartlett.....	E. Windsor, Ct.....	July 19, 1808
Water wheel, (on Rumsey's and McComb's).....	Theodore Burr.....	Burrhaven, Pa.....	April 3, 1817
Water wheel, for saw mills.....	Thomas Shute.....	Tennessee.....	Mar. 6, 1827
Water wheel, for saw and grist mills.....	James Dennison.....	Lanier Township, O.....	Aug. 22, 1827
Water wheel, and saw mills.....	Charles Forse.....	Booneville, Miss.....	Aug. 24, 1832
Water wheel, screw.....	Elijah Skinner.....	Sandwich, N. H.....	Sept. 11, 1827
Water wheel, screw.....	Ebenezer Beard.....	Charlestown, Mass.....	Jan. 25, 1828
Water wheel, screw, spiral.....	Alexander McKainy.....	West Tennessee.....	Feb. 10, 1818
Water wheel, sliding gear.....	Sylvanus Guernsey.....	Fenner, N. Y.....	April 12, 1824
Water wheel, spiral.....	Benjamin Schoolfield & Wm. Stanton.....	Lynchburg, Va.....	April 25, 1811
Water wheel, spiral.....	Abner Vansant.....	Jefferson co., Mis.....	Sept. 29, 1823
Water wheel, spiral bucket.....	James Kelly.....	Jackson county, O.....	Feb. 21, 1826
Water wheel, spiral bucket.....	Joseph C. Green.....	Fayette, Me.....	May 30, 1837
Water wheel, spiral bucket.....	Lorenzo D. Adkins.....	Perry, Ohio.....	May 17, 1839
Water wheel, spiral float.....	Fitch Ives.....	Lisle, N. Y.....	July 5, 1809
Water wheel, spring bucket.....	Asa Waters.....	Millbury, Mass.....	Dec. 22, 1818
Water wheel, sub.....	Cyrus Bent.....	Ohio.....	Mar. 7, 1803
Water wheel, sub.....	John Johnson.....	Knox county, Ind.....	Mar. 21, 1808
Water wheel, supplying.....	John Houghton.....	Greene county, Ga.....	Jan. 13, 1829
Water wheel, tide.....	Cyrus Betts.....	New York.....	Mar. 18, 1797
Water wheel, tide.....	William Stubbs.....	Chilkeoths, Ohio.....	May 1, 1809
Water wheel, tide.....	Dexter Wheeler.....	Bristol, Mass.....	Mar. 2, 1811
Water wheel, tide.....	N. Gates & A. Max- well.....	Delhi, N. Y.....	Sept. 13, 1820
Water wheel tide.....	Thomas Rowand.....	Philadelphia, Pa.....	Nov. 10, 1846
Water wheel, and tide.....	T. B. Van Gasbec and B. Sands.....	Kingston, N. Y.....	Dec. 24, 1894

* Renewed June 29, 1833. † Renewed by act of Congress for seven years, from October 19, 1843.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Water wheel, tide, and current...	Samuel Morey.....	Oxford, N. H.....	Mar. 13, 1817
Water wheel, tide, and current...	Amasa Dingley and Israel S. Savage....	Waterville, Me.....	April 16, 1823
Water wheel, tide, and current...	Asa Madison.....	Detroit, Mich.....	July 10, 1830
Water wheel, tide, and current, spiral.....	Elias Ring.....	New York.....	Dec. 10, 1798
Water wheel, tide, and current, regulating.....	John Martin.....	New York.....	April 27, 1797
Water wheel, trycylindric.....	Eugene Burganzio....	New York city.....	Nov. 2, 1831
Water wheel, tub.....	Charles McLean and Solomon Loomis....	Hartford, Conn....	Sept. 25, 1805
Water wheel, tub, or thread.....	Elias Davis.....	Bangor, Me.....	April 9, 1831
Water wheel, tub.....	Edward Newman.....	Stilesville, Ind.....	Nov. 26, 1825
Water wheel, tub.....	David P. Napier.....	Liberty, Ky.....	May 22, 1837
Water wheel, tub.....	Abijah Woodward....	Athol, Mass.....	May 8, 1840
Water wheel, turbine.....	Theodore R. Timby....	Cato 4 corners, N.Y.	Nov. 10, 1846
Water wheel, two at a time.....	Luke C. Hinman L. Bissell, and Moses Barnes.....	Otsego, N. Y.....	June 7, 1811
Water wheel, undershot.....	Ebenezer Cochran....	Gibson county, Ind.	June 15, 1835
Water wheel, vertical.....	John Maze.....	Greenbrier co., Va..	Jan. 10, 1823
Water wheel, vertical tide.....	Robert Leal.....	Delhi, N. Y.....	May 31, 1822
Wells, covers of.....	Levi Kidder.....	New York city.....	Jan. 15, 1836
Windlass*.....	Harvey W. Sabin....	Rushville, N. Y....	Oct. 10, 1846
Windmill.....	Wantsford Evans....	Dumfries, Va.....	July 12, 1839
Windmill.....	Isaac Garver and Sam- uel Fahrney.....	Boonsborough, Md.	Dec. 28, 1840
Windmill.....	William Zimmerman..	Stephenson, Ill....	May 29, 1841
Windmill.....	Perry Davis.....	Fall River, Mass....	Aug. 11, 1841
Windmill.....	Alexander McGrew....	Cincinnati, Ohio....	Aug. 2, 1842
Windmill.....	Allen Judd.....	Cabottville, Mass..	May 2, 1846
Windmill, horizontal.....	John M. Van Osdel....	Chicago, Ill.....	Mar. 12, 1841
Wind wheel.....	Jos. Pope.....	Boston, Mass.....	Jan. 26, 1793
Wind wheel.....	Charles Holden.....	Vermont.....	Mar. 15, 1798
Wind wheel.....	James Sharpless.....	New York.....	Sept. 15, 1801
Wind wheel.....	John A. Morton.....	.....	Dec. 16, 1801
Wind wheel.....	Rufus Hathaway.....	Massachusetts.....	Jan. 20, 1802
Wind wheel.....	Ashael E. Payne.....	New York.....	Nov. 19, 1803
Wind wheel.....	Richard Weems.....	Annapolis, Md.....	Sept. 20, 1804
Wind wheel.....	William Stanton, jr....	Lynchburg, Va.....	Dec. 26, 1804
Wind wheel.....	John Cooper.....	Philadelphia, Pa....	May 22, 1806
Wind wheel.....	Uzzal Geer.....	Norwich, Conn.....	July 18, 1808
Wind wheel.....	Russel H. Wright....	Boston, Mass.....	April 25, 1810
Wind wheel.....	James Barron.....	Elizabeth city, Va..	July 18, 1816
Wind wheel.....	Moses Isaacs.....	Philadelphia, Pa....	May 28, 1818
Wind wheel.....	Pierr Etienne.....	New York.....	Nov. 14, 1820
Wind wheel.....	William Phœbus.....	New York.....	June 24, 1822
Wind wheel.....	Jesse Mollineux.....	N. Hempstead, N. Y.	Jan. 24, 1823
Wind wheel.....	William Coburn.....	Gardiner, Me.....	June 2, 1826
Wind wheel.....	Moses Padley.....	Ontario, N. Y.....	Aug. 31, 1826
Wind wheel.....	Abner Murray.....	Athens, Pa.....	July 8, 1828
Wind wheel.....	David McColler.....	Hudson, Ohio.....	May 2, 1829
Wind wheel.....	Job Wilbur.....	Fall River, Mass....	Mar. 30, 1836
Wind wheel.....	Ebenezer B. Sperry....	Weyham, Mass.....	Aug. 31, 1837
Wind wheel.....	Jacob D. Makely.....	Cairo, N. Y.....	Nov. 23, 1837
Wind wheel.....	John R. Remington....	Aberfoil, Alabama..	June 18, 1842
Wind wheel, horizontal.....	John B. Aveilhé.....	South Carolina.....	Mar. 16, 1803
Wind wheel, horizontal.....	Samuel Goodwin.....	Baltimore, Md.....	Oct. 31, 1803
Wind wheel, horizontal.....	Thomas P. Jones.....	Newcastle, Del.....	Feb. 6, 1827
Wind wheel, horizontal.....	Walter Ingalls.....	Sanbornton Bridge, N. H.....	Aug. 19, 1828
Wind wheel, horizontal.....	John Y. Van Tuyl....	Rahway, N. J.....	Sept. 28, 1831
Wind wheel, horizontal.....	Jeremiah L. Colman....	Vincennes, Ind.....	May 4, 1833
Wind wheel, horizontal.....	Solomon Deming.....	Brunswick, Ohio....	Mar. 8, 1833

* Antedated September 9, 1846.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Wind wheel, horizontal.....	Wm. Lewis and Thos. J. Lewis.....	Boston, and Cambridge Mass.....	Jan. 27, 1838
Wind wheel, horizontal.....	Daniel Dennet.....	Centreville, La.....	Nov. 13, 1844
Wind wheel, machinery.....	John Gue.....	Waterford, N. Y....	Dec. 31, 1822
Wind wheel, propelling mills boats land vehicles, &c.....	Benjamin Dugdale....	Trenton, N. J.....	May 3, 1832
Wind wheel, regulating.....	Thomas Thompson..	New Jersey.....	Jan. 3, 1799
Wind wheel, regulating.....	Israel Keyes.....	Putney, Vt.....	Sept. 14, 1838
Wind wheel, vertical.....	Abner Murray.....	Athens, Pa.....	July 8, 1828
Wind wheel, or water.....	William L. Bakewell	New Haven, Conn..	Aug. 18, 1809
Wind wheel, or water.....	Daniel Van Vorhies..	Long Island, N. Y.	Mar. 21, 1811
Wind wheel, or water.....	Moses Pennock.....	Kennett's Sq're, Pa.	Feb. 18, 1812
Wind wheel, or water.....	Adkins Nash.....	Addison, Me.....	April 27, 1832
Wind wheel, or water.....	Jonathan Reynolds...	Dutchess Co., N. Y.	June 24, 1815
Wind wheel, or water.....	William Gallup.....	Norwalk, Ohio.....	Mar. 29, 1821

CLASS No. XII.

LEVER, SCREW,

**And other Mechanical Power, as applied to Pressing, Weigh-
ing, Raising, and Moving Weights.**

LIST OF PATENTS.

CLASS XII.—LEVER, SCREW, and other Mechanical Power, as applied to Pressing, Weighing, Raising, and Moving Weights.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Balance.....	Henry Dearborn.....	Boston, Mass.....	Mar. 24, 1819
Balance.....	David Rogers.....	Auburn, N. Y.....	July 13, 1824
Balance [*]	Benj. Morrison.....	Milton, Pa.....	Feb. 13, 1833
Balance.....	Nereston Griffing.....	New York.....	April 8, 1835
Balance.....	Jirah Vaughn.....	Rutland, Vt.....	May 6, 1836
Balance†.....	B. Morrison.....	Milton, Pa.....	Feb. 16, 1837
Balance.....	Benjamin Morrill.....	Boscawen, N. H.....	May 26, 1843
Balance.....	George R. Moore.....	Brattleborough, Vt.....	Jan. 6, 1844
Balance or counter scales for weighing.....	George White.....	Louisville, Ky.....	Nov. 16, 1839
Balance, Columbian.....	William Granger.....	Middlebury, Vt.....	Sept. 8, 1810
Balance, compound lever.....	Jared B. Whitmore.....	Rush, N. Y.....	Feb. 27, 1832
Balance, for counters.....	Elias Hibbard.....	Lunenburg, Vt.....	Nov. 7, 1835
Balance cranes†.....	Claudius Gignaux, as'ee of Louis Henry.....	New York, N. Y. } Paris, France..... }	Nov. 9, 1844
Balance, (on Dearborn's imp.).....	Solomon A. Rogers.....	Geneva, N. Y.....	July 31, 1817
Balance, (on Dearborn's imp.).....	Samuel Blaisdell.....	Lancaster, Ohio.....	Oct. 10, 1827
Balance, (on Dearborn's imp.).....	Uel West and Daniel Loring.....	New York.....	Aug. 23, 1831
Balance, dormant||.....	James K. Casey.....	New York.....	June 23, 1823
Balance, eagle.....	Levins Jencks & Henry Dexter.....	Killingly, Ct.....	Nov. 24, 1834
Balance, lever, spring catch.....	Levi Kendall.....	New York.....	May 8, 1809
Balance, perpetual.....	Russell H. Wright.....	Boston, Mass.....	June 9, 1810
Balance, platform.....	Ira Gay.....	Dunstable, N. H.....	Jan. 14, 1833
Balance, platform.....	John B. Mang.....	New York.....	Feb. 19, 1833
Balance, platform.....	Samuel L. Hay.....	Boston, Mass.....	July 14, 1834
Balance, platform.....	Alexander Bliss.....	Benson, Vt.....	June 12, 1835
Balance, platform.....	C. P. Ladd.....	Strasburg, Vt.....	May 17, 1836
Balance, platform.....	James M. Peck.....	Lyndon, Vt.....	May 23, 1836
Balance, platform.....	John Horton.....	Madrid, N. Y.....	July 2, 1836
Balance, platform.....	Benjamin Bull.....	New York city.....	May 3, 1837
Balance, platform.....	B. Morrison.....	Milton, Pa.....	Mar. 17, 1838
Balance, platform.....	J. B. Dale.....	Lansingburg, N. Y.....	Aug. 30, 1838
Balance, platform.....	R. L. McCollum.....	Rochester, N. Y.....	Dec. 31, 1838
Balance, platform.....	L. Wemple.....	Madison, N. Y.....	April 8, 1840
Balance, platform.....	Albert Dole.....	Bangor, Me.....	July 18, 1840
Balance, platform.....	Thomas Y. Jennings.....	Geneva, Ohio.....	Nov. 10, 1841
Balance, platform.....	Joshua Gibbs.....	Newark, Ohio.....	Sept. 12, 1846
Balance, platform, double lev. scale.....	E. A. & A. Hibbard.....	Lunenburg, Vt.....	May 29, 1835
Balance, platform, scale for weighing.....	Jesse Marden.....	Baltimore, Md.....	Sept. 9, 1835
Balance, portable.....	Albert Dole.....	Bangor, Me.....	Dec. 23, 1841
Balance, scale and beams.....	Samuel Wallis.....	Massachusetts.....	Sept. 21, 1801
Balance, scale beams.....	John Edwards.....	New York.....	May 19, 1806
Balance, scale beams.....	Aaron Pollock.....	Boston, Mass.....	July 31, 1815
Balance, scale beams.....	John Edwards.....	New York.....	Nov. 19, 1816
Balance, scale beams.....	Sol. A. Rodgers.....	Philadelphia, Pa.....	Feb. 19, 1825
Balance or scale beams.....	Seth E. Winslow.....	Philadelphia, Pa.....	July 31, 1840
Balance, scale, compound lever, & self-weighing.....	Hosea H. Grover.....	Springwater, N. Y.....	Dec. 17, 1830
Balance, scale, preponderating.....	Ez. Skinner.....	Camillus, N. Y.....	Aug. 23, 1825

* Reissued Dec. 31, 1833.

† Date of French patent, Oct. 27, 1842.

‡ Add'l imp., Aug. 16, 1838, & Mar. 29, 1841.

§ Reissued Jan. 21, 1829.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN GRANTED.
Balance, scale, spring.....	Daniel Klanberg.....	New York.....	June 12, 1830
Balance, scale, beam, and weights	Alvah H. Tree.....	Troy, N. Y.....	Jan. 9, 1838
Balance, scales for weighing.....	Jonathan Ball.....	Buffalo, N. Y.....	April 20, 1839
Balance, spring.....	J. H. & R. H. Bull..	New York, N. Y.....	Sept. 20, 1844
Balance, steelyards.....	Benjamin Dearborn..	Massachusetts.....	Feb. 14, 1795
Balance, steelyards.....	Louis Dupree.....	South Carolina.....	May 12, 1802
Balance, steelyards.....	John Edwards.....	New York.....	May 19, 1806
Balance, steelyards.....	Barnabas Langdon..	St. Albans, Vt.....	April 23, 1807
Balance, steelyards.....	Samuel Hills.....	Lincoln, Mass.....	Dec. 27, 1815
Balance, steelyards.....	Jac. Bartholomew...	Middlebury, Vt.....	Feb. 27, 1819
Balance, steelyards*.....	E. Fairbanks and T. Fairbanks.....	St. Johnsbury, Vt..	Sept. 22, 1832
Balance, steelyards*.....	E. Fairbanks and T. Fairbanks.....	St. Johnsbury, Vt..	Sept. 22, 1832
Balance, steelyards.....	Christopher F. Dahl..	Pittsburg, Pa.....	Oct. 31, 1835
Balance, steelyards.....	Eli Willemin.....	Leesburg, Ohio.....	Aug. 21, 1841
Balance, steelyards, combined.....	Maxin Crow.....	Rush, N. Y.....	June 13, 1831
Balance, steelyards, lever power.....	Samuel Andrews.....	Bridgetown, Me.....	Mar. 24, 1827
Balance, steelyards and scales.....	Zina Phinney.....	Greene co., N. Y...	Jan. 6, 1814
Balance, weighing apparatus.....	Christ'r E. Dampier..	Ware, England.....	Feb. 12, 1841
Balance, weighing apparatus, moving index.....	Martin Robbins.....	Holidaysburg, Pa..	Jan. 23, 1841
Balance, weighing canal boats and loaded wagons.....	Daniel Loring.....	Newark, N. J.....	Aug. 23, 1831
Balance, weighing canal boats and loaded wagons.....	James Coulter.....	Philadelphia, Pa....	Oct. 13, 1831
Balance.—See <i>Weighing, Class 7</i> .	Thomas Armat.....	Philadelphia, Pa....	May 10, 1811
Balance, weighing hay and cattle.	E. Fairbanks and T. Fairbanks.....	St. Johnsbury, Vt..	June 13, 1831
Balance, weighing heavy bodies.	E. Fairbanks and T. Fairbanks.....	St. Johnsbury, Vt..	Feb. 21, 1832
Balance, weighing machine.....	Eli Wadsworth.....	Hartford, Ct.....	Sept. 7, 1820
Balance, weighing machine.....	James S. Seger.....	New York.....	July 20, 1831
Balance, weighing machine.....	J. G. Rohr, ass'nee of Baptiste Maag.....	New York.....	April 22, 1835
Boom derrick.....	James S. Savage.....	Boston, Mass.....	Feb. 15, 1836
Buildings, removing, with chimneys, and furniture therein.....	Simeon Brown.....	New York.....	July 31, 1837
Buildings, &c., removing.....	Lewis Pullman.....	Portland, N. Y.....	Aug. 21, 1841
Cargoes, ascertaining weight of.....	Amory Amsden.....	Rochester, N. Y.....	June 27, 1838
Condensing cotton.....	Arlon Man.....	Smithfield, R. I.....	April 28, 1836
Crane.....	Ezekiah Bradford.....	New York.....	July 8, 1834
Crane.....	Elias Marsh.....	Oswego, N. Y.....	Feb. 12, 1836
Crane.....	Gilbert Sherwood.....	Eric, Pa.....	June 30, 1836
Crane, labor saving.....	Thomas Godwin.....	New York.....	Oct. 2, 1838
Crane, lever.....	Eb. Smith.....	Oneida co., N. Y.....	Dec. 31, 1818
Elevating brick, stone, and mortar	Charles G. Fairman..	Lewiston, N. Y.....	Dec. 16, 1833
Elevating hay.....	George Wilbur.....	Macedon, N. Y.....	July 17, 1837
Hoisting machine.....	William Purden.....	Baltimore, Md.....	Mar. 19, 1806
Hoisting machine.....	John Drummond.....	New York.....	Mar. 10, 1834
Hoisting machine.....	David Evans.....	Philadelphia, Pa....	Mar. 19, 1834
Hoisting, machinery for.....	John B. Holmes.....	Boston, Mass.....	June 7, 1841
Jackscrew.....	William Ballard.....	New York, N. Y.....	July 7, 1846
Jackscrew.....	Stephen Vail.....	Morris, N. Y.....	May 7, 1839
Jackscrew, goods in ships' holds.	Thomas Evans.....	New York.....	Feb. 16, 1839
Jackscrew, for raising wagons...	William Hoyt.....	Brookville, Ia.....	June 3, 1825
Jackscrew, for raising wagons...	Hex. Salisbury.....	Springfield, Mass..	Mar. 8, 1836
Jackscrew, wooden.....	Zenos Bunker.....	Guilford, N. C.....	Feb. 3, 1819
Lever, angle.....	James Barren.....	Norfolk, Va.....	May 14, 1822
Lever, combination of.....	Caleb Tompkins.....	Montgomery, Ala...	Nov. 14, 1834
Lever, compound pendulum.....	Cyrus Berry.....	Poughkeepsie, N. Y	Nov. 1, 1835
Lever, crank, weight, bal. wheel, combination of.....	Elias T. Merrill.....	Parkman, Me.....	April 22, 1835

* Released Feb. 10, 1837.

† Released Mar. 6, 1834, and Feb. 10, 1837.

‡ Antedated Jan. 14, 1840

§ Additional patent, Sept. 12, 1836.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Lever, gained power.....	Ed. G. Fitch.....	Blakely, Ala.....	Oct. 5, 1827
Lever power.....	William Scarbrough..	Darien, Ga.....	May 19, 1824
Lever power.....	Tylee W. Lafetra.....	New York.....	Jan. 23, 1834
Lever power, accumulating.....	J. Cochran.....	South Hadley, Mass	Mar. 26, 1834
Lever power, engine, and self-regulating combined pendulum...	Sidney Woods.....	Freeport, Me.....	Jan. 7, 1835
Lever power, and inclined wheel.	Peter Wykoff.....	Westport, Ky.....	July 20, 1831
Lever power, projectile.....	George Wood.....	Vernon, Ia.....	June 9, 1830
Lever power, propelling machinery.—See Power, Class 13.	Jeremiah Walker.....	Phillips, Me.....	Feb. 25, 1836
Lever power, sawing by.....			
Lever purchase, machine for working mills.....	Shubael Kimball.....	Rhinebeck, N. Y....	April 24, 1811
Lever, raising bodies.....	Richard Sealy.....	New York.....	July 1, 1822
Lever, rotary engine.....	Caleb Tompkins.....	Montgomery, Ala..	Nov. 14, 1834
Lever and wheels, combination of pluribus unum.	Henry Clare and Pasquale Ricardi.....	New York.....	May 25, 1818
Packing bark.....	Jos. Lyon.....	Philadelphia, Pa....	July 1, 1811
Packing bark, ground.....	Jos. Lyon.....	Philadelphia, Pa....	Jan. 5, 1815
Packing cotton.....	John Cook.....	Fayetteville, N. C..	Oct. 12, 1821
Packing cotton.....	Webb Hart.....	Petersburg, Pa.....	May 4, 1825
Packing cotton.....	Lewis Laysard.....	Halifax, N. C.....	Sept. 28, 1825
Packing cotton.....	David Wilkinson.....	N. Providence, Va..	Dec. 8, 1825
Packing cotton.....	Charles Williams.....	Petersburg, Va.....	June 3, 1826
Packing cotton.....	James H. McClelland..	Fairfield dist., S. C.	Dec. 28, 1826
Packing cotton.....	William C. Thomas.....	Richmond co., Va....	Feb. 15, 1827
Packing cotton.....	O. Stith.....	Laurenceville, Va..	Aug. 25, 1829
Packing flour.....	John Hinman.....	Hartley town'p, Pa..	Mar. 2, 1835
Packing flour.....	Jonathan F. Barrett..	Granville, N. Y.....	Jan. 23, 1836
Packing flour.....	James Banta, jr.....	Utica, N. Y.....	Aug. 2, 1839
Packing flour, and pressing.	Oliver Jewett.....	Rochester, N. Y....	Mar. 30, 1837
Packing machine.....	J. Clarke & E. Evans.		July 20, 1803
Packing machine.....	Tyre Jennings.....	Statesburgh, S. C..	Mar. 3, 1829
Packing screw, inverted.....	Stephen Terry.....	Decatur, Ga.....	June 11, 1836
Packing tobacco, box for.....	J. B. Allen.....	Richmond, Va.....	Jan. 15, 1836
Packing tobacco, staves of cast iron for.....	Thomas Samson.....	Richmond, Va.....	May 11, 1841
Press.....	Silas Hitchcock.....	Vernon, N. Y.....	June 25, 1813
Press.....	Jesse Cramton.....	New York.....	Feb. 18, 1834
Press.....	William B. Leonard.....	Mattawan Wks, N.Y.	Feb. 20, 1843
Press.....	Amos Jackson.....	Liberty, Ill.....	June 24, 1844
Press, brick.—See Class 15.			
Press, centripetal power.....	E. S. Scripture.....	Cazenovia, N. Y....	Sept. 26, 1834
Press, cheese.....	Jesse Arnold.....	Pawlings, N. Y....	Oct. 26, 1807
Press, cheese.....	Ephraim Warner.....	Waterbury, Ct.....	April 12, 1808
Press, cheese.....	Levi Martin.....	Granville, N. Y....	Dec. 19, 1808
Press, cheese.....	Hez. Dickerman.....	Barnstable, Mass....	Dec. 27, 1808
Press, cheese.....	Hazel Irwin.....	Boston, Mass.....	Dec. 28, 1808
Press, cheese.....	Phineas Allen.....	Burlington, N. Y....	May 13, 1809
Press, cheese.....	Benjamin Atwell.....	Burlington, N. Y....	July 18, 1809
Press, cheese.....	Eb. Raymond.....	Sherburn, N. Y.....	Feb. 22, 1810
Press, cheese.....	W. W. Townsend.....	Addison co., Vt....	June 13, 1812
Press, cheese.....	Jos. Golding.....	Worcester, Mass....	May 27, 1814
Press, cheese.....	Rand White.....		Mar. 3, 1815
Press, cheese.....	Alexander Norton.....	Goshen, Ct.....	May 6, 1820
Press, cheese.....	Jos. Pride.....	Potsdam, N. Y.....	Dec. 9, 1824
Press, cheese.....	Lebbeus Caswell.....	Harrison, Me.....	Dec. 9, 1825
Press, cheese.....	D. Hitchcock and C. Stone.....	New York.....	July 24, 1828
Press, cheese.....	Rd. McOmber.....	Galway, N. Y.....	Oct. 27, 1829
Press, cheese.....	Reynold Webb & Jonathan Cox.....	Madison, Ct.....	Feb. 27, 1830
Press, cheese.....	Myron Norton.....	Goshen, Ct.....	Oct. 13, 1830
Press, cheese.....	John S. Pulsifer & E. Pulsifer.....	Ipswich, Mass.....	Feb. 14, 1831

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Press, cheese.....	Benjamin Hinkley....	Fayette, Me.....	Oct. 25, 1833
Press, cheese.....	Asahel Tyrrill.....	Fowler, Ohio.....	Dec. 31, 1833
Press, cheese.....	Sylvester Kibbe.....	Schoharie, N. Y....	July 18, 1834
Press, cheese.....	Elijah Barnes.....	N. Brookfield, Mass.	Sept. 5, 1834
Press, cheese.....	David Phelps.....	Bangor, Me.....	June 12, 1835
Press, cheese.....	Sullivan White.....	Bridgewater, Vt....	Aug. 15, 1837
Press, cheese.....	Luke Hale.....	Hollis, N. H.....	June 30, 1838
Press, cheese.....	Adin Gaunt.....	Springfield, N. J....	July 6, 1839
Press, cheese.....	Wm. W. Townsend..	Shoreham, Vt.....	Dec. 18, 1839
Press, cheese.....	Rufus Porter.....	Billerica, Mass.....	April 15, 1840
Press, cheese.....	J. A. Fletcher.....	Irasburg, Vt.....	June 20, 1840
Press, cheese.....	Damon A. Church....	Friendship, N. Y....	May 4, 1841
Press, cheese.....	Job Arnold.....	Harmony, N. Y....	April 2, 1841
Press, cheese.....	Sylvanus Bartlett....	Hocking co., Ohio..	Feb. 28, 1842
Press, cheese, and cider.....	Eb. Benedict.....	N. Marlboro', Mass.	Mar. 21, 1808
Press, cheese, and cider.....	Eb. Benedict.....	N. Marlboro', Mass.	June 18, 1808
Press, cheese, and cider, oil, and tobacco.....	Israel Nichols.....	Otsego, N. Y.....	Oct. 12, 1809
Press, cheese, and cider.....	Lebbeus Caswell....	Harrison, Me.....	Dec. 18, 1826
Press, cheese, and cider.....	John Holmes.....	Paris, Me.....	Feb. 6, 1832
Press, cheese, construction of....	Hartwell Kendall....	Danby, Vt.....	July 15, 1842
Press, cheese, self-acting.....	C. Stone, F. K. Collins, and G. S. Collins...	Ravenna, Ohio.....	July 28, 1842
Press, cheese, self-acting.....	Chester Stone.....	Rootstown, Ohio...}	Aug. 6, 1842
	F. K. & G. S. Collins.	Ravenna, Ohio...}	
Press, cheese, self-acting.....	C. Stone and G. S. Collins.	Rootstown and Ravenna, Ohio.....	May 29, 1842
Press, cheese, self-acting.....	John Martin, jr.....	Aztalan, W. T.....	Nov. 26, 1844
Press, cheese, self-adjusting.....	Rufus Porter.....	Billerica, Mass.....	Feb. 6, 1835
Press, cheese, self-propelling, hanging lever.....	John S. Cram.....	Hanover, N. H.....	Dec. 27, 1831
Press, cheese, (on Townsend's improvement).....	Jos. Bigelow.....	Montpelier, Vt.....	Jan. 25, 1816
Press, combination of powers....	Thos. & John P. Bakewell.....	Pittsburg, Pa.....	Jan. 14, 1829
Press, construction of.....	John J. Wise.....	Baltimore, Md.....	May 16, 1839
Press, cotton.....	Jacob Idler.....	Pennsylvania.....	Sept. 24, 1802
Press, cotton.....	Rd. V. W. Thorne & John Thorne.....	New York.....	Feb. 22, 1810
Press, cotton.....	John Graham.....	China Grove, S. C..	June 17, 1830
Press, cotton.....	Franklin Shaler.....	Georgetown, Ohio..	May 5, 1834
Press, cotton.....	Jac. N. Gordon.....	Plymouth, N. C....	Oct. 8, 1825
Press, cotton.....	Gideon Glenn.....	Lewisburg, N. C....	April 12, 1826
Press, cotton.....	J. Boltwright and J. Nathans.....	Richland, S. C.....	Nov. 21, 1826
Press, cotton.....	Philemon White.....	Chatham co., N. C..	Feb. 19, 1827
Press, cotton.....	Richard Jernigan.....	Waynesburgh, N. C.	May 15, 1827
Press, cotton.....	William J. Cocke....	Cabin Point, Va....	Feb. 4, 1828
Press, cotton.....	Philenzo Payne.....	Claiborne co., Miss.	Aug. 10, 1829
Press, cotton.....	James Carson.....	Raleigh, N. C.....	Nov. 4, 1830
Press, cotton.....	Philenzo Payne and J. Randall.....	Port Gibson, Miss..	July 20, 1831
Press, cotton.....	David Phillips.....	Natchez, Miss.....	April 27, 1832
Press, cotton.....	P. Payne & J. Rundell	Claiborne co., Miss.	Jan. 25, 1833
Press, cotton.....	Henry L. Conner.....	Natchez, Miss.....	July 5, 1833
Press, cotton.....	Thos. H. Scarborough	Brownsville, Tenn..	Oct. 16, 1834
Press, cotton.....	J. Mitchell.....	Rutherford, Tenn....	Mar. 12, 1836
Press, cotton.....	Gideon Fitz.....	Clinton, Miss.....	June 3, 1837
Press, cotton.....	Henry Waterman....	Bath, Me.....	May 10, 1838
Press, cotton.....	Alexander Jones....	New Orleans, La....	Oct. 26, 1838
Press, cotton.....	Jas. R. Hitchcock and Wm. F. Serrell....	New York, N. Y....	Sept. 30, 1839
Press, cotton.....	John Price.....	Nashville, Tenn....	Dec. 7, 1839
Press, cotton.....	Fowler M. Ray.....	Catskill, N. Y.....	Aug. 25, 1840

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Press, cotton	Wm. C. Van Hoesen.	Catskill, N. Y.	April 2, 1841
Press, cotton	W. C. Van Hoesen ..	Catskill, N. Y.	Feb. 1, 1842
Press, cotton	Parry W. Porter	Columbia, Tenn.	Aug. 11, 1842
Press, cotton	Samuel Fry	New York, N. Y.	May 7, 1842
Press, cotton	Thomas W. Harvey ..	New York, N. Y.	Feb. 4, 1843
Press, cotton	Otis Whitney	Augusta, Me.	Mar. 17, 1843
Press, cotton	John R. Remington ..	Montgomery, Ala.	April 15, 1843
Press, cotton	Seth Lamb	New York, N. Y.	May 12, 1843
Press, cotton	Josias Chambers	Alexandria, La.	May 19, 1843
Press, cotton	Wm. F. and Charles J. Provost.	Lower Three Runs, S. C.	Nov. 21, 1843
Press, cotton	Seth Lamb	New York	Mar. 16, 1844
Press, cotton	Perry G. Gardiner ..	New York	Mar. 20, 1844
Press, cotton	Wm. Sewell, jr.	Macon, Penn.	June 15, 1844
Press, cotton	George Peck	Fairfield, Ct.	Mar. 9, 1844
Press, cotton	William F. Provost ..	Barnwell dist., S. C.	Sept. 14, 1844
Press, cotton	Jedediah Prescott ..	Memphis, Tenn.	Nov. 9, 1844
Press, cotton	Peter M. Wright	New York	Nov. 26, 1844
Press, cotton	William Bulloch	Jersey City, N. J.	Jan. 4, 1845
Press, cotton	Philos B. Tyler	Philadelphia, Pa.	Jan. 16, 1845
Press, cotton	Joseph Slocum	Syracuse, N. Y.	April 16, 1845
Press, cotton and hay	Moses Jaques & Henry Freeman	Woodbridge, N. J.	Oct. 2, 1811
Press, cotton and hay	Thomas D. Wilson ..	Condon, Ia.	July 6, 1827
Press, cotton and hay	Robert Triplett	Davies co., Ky.	May 19, 1834
Press, cotton and hay	Isaac Robinson, ass'ee of Sam'l T. Baker ..	Portland, Me.	Dec. 17, 1834
Press, cotton and hay*	Alex'r J. Murray	West Point, N. Y.	Jan. 9, 1835
Press, cotton and hay	Eleazer Eliason, jr.	Fredericksburg, Va.	Jan. 21, 1835
Press, cotton and hay	Samuel T. Baker	West Gorham, Me.	Mar. 20, 1835
Press, cotton and hay	E. & L. L. Macomber ..	Gardiner, Me.	Aug. 15, 1835
Press, cotton and hay	Charles W. Hawkes ..	Brunswick, Me.	April 18, 1836
Press, cotton and hay†	Joseph C. Baldwin ..	Staunton, Va.	Feb. 22, 1839
Press, cotton and hay†	Jas. E. Kelsey & Jas. A. Potter	Providence, R. I.	Sept. 25, 1840
Press, cotton and hay	Lem'l Bolles, Jedediah Prescott, and Wm. A. Bickford	Memphis, Tenn.	Feb. 13, 1841
Press, cotton and hay	Charles W. Hawkes ..	Brunswick, Me.	May 29, 1841
Press, cotton, hay†	S. W. Bullock	Williamsburg, N. Y.	Mar. 23, 1842
Press, cotton, hay	P. G. Gardiner	New York, N. Y.	April 16, 1842
Press, cotton, hay, &c., toggle joint	Robert Harding	South Berwick, Me.	Sept. 3, 1842
Press, cotton, hay	Caleb Martine	Greensburg, N. Y.	May 30, 1842
Press, cotton and hay	William Bullock	Jersey City, N. J.	Sept. 28, 1843
Press, cotton, horizontal rack and pinion	Zenos Bronson	Jasper county, Ga.	July 17, 1829
Press, cotton, oil, and tobacco ..	Gideon Palmer	Montville, Conn.	Dec. 14, 1830
Press, cotton and other	P. G. Gardiner	New York	Feb. 28, 1845
Press, cotton and other	Daniel Gooss, assignee of Joseph C. Colt ..	New York	April 22, 1845
Press, cotton and tobacco	David Flagg and Chas. Peck	Gardner, Maine	Dec. 30, 1826
Press, cotton, water power	Josiah Darden	Washington, Ala.	June 23, 1825
Press, cylindrical, steam	E. Barker and J. and A. Hall	Boston, Mass.	July 12, 1816
Press, double, foundry	William Blake	Bolton, Mass.	April 29, 1833
Press, flour	Sylvanus Hathaway ..	Massillon, Ohio.	Feb. 13, 1833
Press, flywheel	David Evans	Philadelphia, Pa.	Aug. 26, 1831
Press, hay	Moses B. Bliss	Pittstown, Maine	Jan. 26, 1838
Press, hay	A. R. Chamberlain and A. Clevin	Richmond, Va.	Mar. 30, 1836
Press, hay and cotton	Nicholas J. Lampman ..	Coxsackie, N. Y.	Oct. 17, 1846
Press, hay, cotton, and hemp	Jacob Grosvenor	City of New York ..	Aug. 31, 1837

* Released May 17, 1842.

† Additional improvement, Feb. 1, 1842.

† Released July 6, 1839.

‡ Released Aug. 14, 1844.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Press, hay.....	Samuel Hewitt.....	Allensville, Ind....	Dec. 30, 1845
Press, hay.....	Charles F. Paine.....	Winslow, Maine....	April 25, 1844
Press, hay.....	David R. Allen.....	Cumberland, Md....	April 25, 1846
Press, hay, cider, and oil.....	Nathan Whiting.....	Augusta, Maine....	Feb. 15, 1836
Press, hay, cotton.....	David Flagg and Chas. Peck.....	Gardiner, Maine....	Dec. 30, 1826
Press, hay, double box.....	Ezra Waterhouse.....	Gardiner, Maine....	Nov. 14, 1826
Press, hay, hops.....	Jos. Wilson.....	Otsego, N.Y.....	Feb. 17, 1826
Press, hydrostatic.—See Class 11.			
Press, improved.....	George C. Chesley...	Rocky Mount, Vt..	June 27, 1833
Press, inclined friction roller.....	Luther Carman.....	Oxford, Maine....	April 7, 1831
Press, increasing.....	Abraham Norton.....	Litchfield, Conn....	Feb. 11, 1812
Press, leather.....	Jonathan Elliot.....	Sharon, Conn....	Jan. 18, 1810
Press, lever.....	Thatcher Blake.....	Turner, Maine....	Feb. 20, 1821
Press, lever.....	William Lynn.....	Danville, Va.....	April 26, 1823
Press, lever.....	Benjamin Morris.....	Binghamton, N.Y.	Feb. 2, 1830
Press, lever.....	Hazard Sharman.....	Scriba, N.Y.....	Nov. 1, 1830
Press, lever.....	Jonathan Payne.....	Russellville, Ky....	Sept. 9, 1835
Press, lever*.....	H. G. Guyon.....	New York.....	July 2, 1836
Press, lever, bottom, combined...	Emanuel Veneau.....	Halifax, N.Y.....	May 10, 1826
Press, lever, compound.....	John Rogers.....	Mauzy county, Tenn.	Jan. 21, 1829
Press, lever, progressive.....	Jacob Perkins.....	Philadelphia, Pa....	Feb. 27, 1819
Press, lever, spiral.....	Abraham O. Stansbury	New York.....	Mar. 21, 1821
Press, lever, tackle, windlass...	John B. Carpenter....	Henderson, N.Y....	Jan. 30, 1830
Press, lever, windlass.....	Thaddeus Williams, jr.	Philadelphia, Pa....	Aug. 31, 1810
Press, oil.....	Josiah White.....	Massachusetts.....	Nov. 27, 1804
Press, oil.....	John Hallock.....	Egg Harbor, N.J....	Jan. 22, 1822
Press, oil.....	Isaac Clowes.....	Hampton, Va.....	Nov. 3, 1825
Press, oil.....	William H. Hoegg...	Ashtabula, Ohio....	May 20, 1826
Press, oil, (improvement on Cunningham and Edmonston's)	Samuel S. Edmonston	New York.....	Sept. 1, 1813
Press, oil, and straining.....	John Cunningham and S. S. Edmonston...	New York.....	June 22, 1812
Press, portable screw.....	Alexander Hallam...	New Orleans, La....	Sept. 14, 1843
Press, printing.—See Class 18.			
Press, rotary, toggle joint.....	Thomas W. Harvey...	Jamestown, N.Y....	April 27, 1832
Press, rotary, woollen, and cotton goods.....	Moses Bayley.....	Salisbury, Mass....	July 5, 1837
Press, screw.....	Thomas Cahoon.....	Cazenovia, N.Y....	April 14, 1808
Press, screw.....	Thomas Gilpin.....	Wilmington, Del....	April 3, 1835
Press, screw, for cotton.....	Jacob Pierson.....	Knoxville, Tenn....	Oct. 17, 1811
Press, screw, double.....	Elisha Winter.....	New Orleans.....	Sept. 4, 1810
Press, screw, and application to the pressure of Elaine from tallow..	Richard Jones.....	Circleville, Ohio....	Oct. 9, 1841
Press, seal.....	A. Ralston Chase....	Cincinnati, Ohio....	April 19, 1841
Press, standing.....	Charles Evans.....	Philadelphia, Pa....	June 13, 1831
Press, standing.....	John H. Stewart.....	Philadelphia, Pa....	Aug. 11, 1831
Press, standing.....	Aaron Hale.....	Boston, Mass.....	June 26, 1832
Press, standing.....	Samuel Fairbank.....	New York.....	May 15, 1833
Press, standing, frame.....	Joel Barns.....	Philadelphia, Pa....	April 17, 1837
Press, standing, frame, (improvement on Brown's).....	Benjamin F. Brown...	New York.....	Mar. 2, 1832
Press, standing, lever and pulley power applied to.....	Robert Hoe.....	New York.....	April 22, 1828
Press, tobacco.....	George W. Grater....	Boston, Mass.....	Oct. 1, 1830
Press, tobacco.....	Edmund Brown.....	Richmond, Va.....	April 30, 1819
Press, tobacco.....	Simon Frazier.....	Nottingham, Md....	Mar. 23, 1820
Press, tobacco.....	George Booker.....	Richmond, Va.....	Feb. 8, 1832
Press, tobacco.....	Jehu W. Weems.....	West River, Md....	Dec. 15, 1835
Press, tobacco.....	A. M. McLean.....	Russellville, Ky....	Feb. 5, 1836
Press, tobacco.....	James H. Washington	Baltimore, Md....	Oct. 12, 1837
Press, tobacco.....	Thomas G. Hardesty...	Tracy's Landing, Md.	May 23, 1841
Press, tobacco.....	Elliott Richardson...	West River, Md....	July 16, 1841
Press, tobacco.....	Albert Sned.....	Richmond, Va.....	Sept. 11, 1841

* Disclaimer, November 14, 1842. † Reissued Sept. 5, 1846.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN MADE.
Press, tobacco	Joseph Bucey.....	West River, Md.....	Dec. 23, 1841
Press, tobacco, cast iron cases.....	Granville D. Allen.....	Richmond, Va.....	June 30, 1897
Press, tobacco, double lever.....	Caleb Johnston.....	New Glasgow, Va.....	June 3, 1808
Press, tobacco, flattener.....	Emanuel Shovier.....	Richmond, Va.....	April 22, 1835
Press, tobacco, and iron case.....	John Galloway.....	Baltimore, Md.....	April 2, 1824
Press, tobacco, for rolled.....	James T. Bowman.....	Patonsbury, Va.....	July 5, 1837
Press, toggle	John Hale.....	Hollis, N. H.....	April 20, 1881
Press, tripple rafter.....	Robert Bradley.....	Natchez, Miss.....	June 4, 1834
Press, tub, for oleaginous seeds.....	Francis Follet.....	Petersburg, Va.....	Aug. 14, 1834
Press, wedge	Oliver Perkins.....	Oxford, Maine.....	Aug. 30, 1832
Press, wheel.....	Her. Butts.....	Connecticut.....	Sept. 13, 1803
Pressing, art of.....	Joseph Tinkler.....	Massillon, Ohio.....	Aug. 31, 1831
Pressing and boring.....	Robert Ramsey.....	Hanover, N. H.....	July 9, 1808
Pressing hay.....	Richard V. W. Thorn.....	New York.....	April 29, 1813
Pressing hay.....	Moses B. Bliss.....	Pittsstown, Maine.....	Jan. 26, 1828
Pressing hay, and binding.....	David C. Simmons and Condy Raguet, ad- ministrator of James Simmons.....	Philadelphia, Pa.....	Nov. 7, 1809
Pressing hay, &c., wooden screws for.....	John Morrison.....	Hardinsburg, Ind.....	Mar. 12, 1831
Pressing, hoisting, and lowering.....	Philip Freeman.....	Amboy, N. J.....	Feb. 20, 1822
Pressing, lever powers for.....	Robert Sanderson.....	Athens, Ohio.....	Feb. 20, 1844
Pressing machine.....	Robert P. Cunningham.....	Pomfret, Conn.....	May 21, 1808
Pressing machine.....	Richard V. W. Thorne and John Thorne.....	New York.....	Mar. 26, 1810
Pressing machine.....	Timothy Puffer.....	Paris, N. Y.....	May 23, 1815
Pressing machine.....	Lester E. Dennison.....	Saybrook, Conn.....	Oct. 1, 1830
Pressing, machines for preparing tobacco for.....	David Smith.....	South Hill, Va.....	Jan. 15, 1844
Pressing and raising weights.....	Thayer Cummings.....	Mayville, N. Y.....	Feb. 19, 1829
Pressing and raising weights.....	Alonzo S. Greenville.....	Camb'dge Port, Mass.....	Dec. 30, 1835
Pressing and raising weights, ma- chines for.....	Smith Cram.....	New York.....	Mar. 9, 1844
Raising and lowering weights.....	Ephraim Morris.....	New York.....	July 5, 1845
Raising and moving heavy weights.....	Albert D. Bishop.....	Brooklyn, N. Y.....	Aug. 22, 1846
Raising heavy bodies, and extract- ing stumps.....	Roswell H. Hall.....	Branchport, N. Y.....	Sept. 15, 1838
Raising heavy bodies, machinery for.....	George Kilburn.....	Walpole, N. H.....	Aug. 25, 1838
Raising buildings, materials.....	Chester Samson.....	Brattleborough, Vt.....	Feb. 27, 1834
Raising ships, &c., by cradle screw.....	Charles Miner.....	Lynn, Conn.....	Oct. 12, 1827
Raising ships, &c., by cradle screw.....	Charles Miner.....	Lynn, Conn.....	Nov. 16, 1827
Scales, counter	Eliphalet H. Parker.....	Buckport, Maine.....	May 26, 1843
Screw, Archimedian.....	Jeremiah Black.....	Northumberland, Pa.....	Jan. 17, 1818
Screw, Archimedian.....	James Cooper.....	Augusta county, Va.....	Dec. 14, 1819
Screw, Archimedian.....	Perry Harris.....	Preble county, Ohio.....	Mar. 25, 1823
Screw for propelling machinery.....	William H. Godfrey.....	Rochester, N. Y.....	Nov. 27, 1826
Seals, notarial.....	John Frazer.....	New York, N. Y.....	June 9, 1843
Tobacco cask, keg head.—See Class 2, Bands.			
Toggle joint, mode of adjusting.....	S. V. Bullock.....	Williamsburg, N. Y.....	July 10, 1845
Vice, perpetual lever.....	Calvin Wing.....	Gardiner, Maine.....	Mar. 2, 1826
Weigh locks for weighing canal boats and other bodies.....	Jeremiah Brainerd.....	Rome, N. Y.....	July 17, 1839
Weighing boats and cargoes.....	Eliazar Cady.....	Canaan, N. Y.....	Jan. 6, 1830
Weighing canal boats.....	Benjamin Bull.....	New York.....	June 20, 1826
Weighing goods on board of boats.....	Thomas Cahoon.....	Troy, N. Y.....	June 18, 1829
Weighing, packing, and pressing machine.....	Gilbert D. Jones.....	New York, N. Y.....	June 27, 1846
Weighing heavy bodies, apparatus for.....	Thaddeus Fairbanks.....	St. Johnsbury, Vt.....	Sept. 15, 1846
Weights, cast iron, adjusting.....	Alden Babcock.....	Boston, Mass.....	Nov. 6, 1815
Weights, raising	Heary Nold.....	Bucks county, Pa.....	Jan. 22, 1817
Weights, raising	Almorán Holmes.....	Boston, Mass.....	Oct. 21, 1824

* Additional patent, December 31, 1838.

† Antedated January 31, 1845.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Winch and gin for loading vessels	Eleazer Allen.....	New York.....	Feb. 29, 1832
Windlass.....	Russel Evarts.....	Madison, Conn.....	May 30, 1838
Windlass.....	F. G. Cameron.....	New York.....	June 12, 1838
Windlass and capstan.....	John Calvin.....	Philadelphia, Pa....	Oct. 6, 1810
Windlass or drums for raising weights.....	Enoch Robinson.....	Boston, Mass.....	Feb. 28, 1842
Windlass power.....	William Pennell.....	Brunswick, Maine..	June 29, 1829
Windlass, ship's.....	Hez. Betts.....	Norwalk, Conn....	Aug. 29, 1804
Windlass, ship's.....	Samuel Nicholson....	Boston, Mass.....	Dec. 1, 1823
Windlass, ship's.....	L. V. Badger and Rich ard Walker.....	Portsmouth, N. H..	June 17, 1834
Windlass, ship's.....	Seth Adams.....	Boston, Mass.....	Feb. 6, 1835
Windlass, ship's.....	Adams and Hammond, assignees of A. Ham- mond.....	Boston, Mass.....	Oct. 6, 1843
Windlass, for weighing anchors..	John M. O'Brien.....	Brunswick, Maine..	Nov. 9, 1838

CLASS No. XIII.

GRINDING MILLS,

And Mill-gearing, containing Grain Mills, Mechanical Movements, and Horse Powers, &c.

LIST OF PATENTS.

CLASS XIII.—GRINDING MILLS and Mill-gearing, containing Grain Mills, Mechanical Movements, and Horse Powers, &c.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Apples, grinding	Joel Farnham	Tioga, N. Y.	June 28, 1825
Apples, grinding	Bela Churchill	Buckfield, Me.	Dec. 9, 1825
Apples, grinding	Constant H. Weeks ..	Paris, N. Y.	April 9, 1827
Apples, grinding	David Demarist.	New Milford, N. Y. .	Jan. 14, 1829
Apples, grinding	Jonathan R. Deane. .	Augusta town'ip, O. .	April 5, 1832
Apples, grinding, corn, bark. .	David Parmelee	Reading, Ct.	Mar. 4, 1830
Apples, grinding and making cider, apparatus for	G. W. D. Culp.	Alhenville, Indiana. .	Nov. 14, 1846
Apples, grinding, potatoes, and shelling corn.	Edmond Harris, James Newton, Wil'd Webster and Jehiel W. Dart.	Truxton, N. Y.	Mar. 10, 1832
Apples, grinding, rotary cylinder.	Silas Freeman, jr.	New Marlboro' Mass	Mar. 14, 1831
Apples, grinding, and shelling corn	Moses Morehouse ...	Butler county, Ohio.	Jan. 23, 1834
Apples, mill.	H. E. Paine and S. H. Russell.	La Roy, Ohio.	Mar. 5, 1837
Balance, or fly wheel	J. Osdroman.	New York.	April 26, 1819
Bands	Samuel Sawyer.	Boston, Mass.	Mar. 30, 1833
Bands, metallic, communicating power	Joseph Eve	Augusta, Ga.	May 1, 1836
Bands, spiral wheel	Samuel S. Walley	Chester, Pa.	Aug. 17, 1835
Bark, breaking	Nathan Sears	Hudson, N. Y.	Oct. 31, 1830
Bark, grinding	Jonathan Kilborn.	Connecticut.	Aug. 23, 1800
Bark, grinding	David Pekon.	Lyme, N. H.	Sept. 30, 1815
Bark, grinding	Merrit Hurd	Augusta, N. Y.	May 3, 1831
Bark, grinding, cracking corn. .	Milo J. Whiton.	Amsterdam, N. Y. .	April 30, 1834
Bark, grinding, and packing. .	Jos. Richardson and Benj. Stout	Bucks county, Pa. .	June 6, 1812
Bark, grinding, softening hides, grist mill.	Chester Griswold and Hosea E. Potter. .	Otsego, N. Y.	Nov. 20, 1810
Bark mill	John Barclay.	Pennsylvania.	June 19, 1794
Bark mill	Thomas W. Pryor.	Pennsylvania.	May 21, 1805
Bark mill	Cornelius Toby	Hudson, N. Y.	May 7, 1807
Bark mill	Paul Pillsbury	Newbury, Mass.	Sept. 22, 1808
Bark mill	Luther Gale.	Berkshire Co., Mass	Mar. 20, 1811
Bark mill	Caleb Churchman and Geo. Martin.	Upper Chichester, Pa	July 16, 1813
Bark mill	Jared Olds	Meriden, Ct.	April 18, 1814
Bark mill	Luther Gale.	Lenox, Mass.	May 16, 1815
Bark mill	Alexander Tolson.	Georgetown, D. C. .	June 2, 1821
Bark mill	E. and J. Trask.	Sangerfield, N. Y. .	Nov. 22, 1831
Bark mill	James Elliot.	Philadelphia, Pa. .	May 24, 1822
Bark mill	Cotton Foss.	Madison, Ohio.	Oct. 25, 1836
Bark mill	Aaron Bull.	Caroline, N. Y.	Mar. 27, 1836
Bark mill	John Montgomery. .	Sangerfield, N. Y. .	May 29, 1838
Bark mill	Merrit Hurd	Augusta, N. Y.	Feb. 1, 1830
Bark mill	Chas. H. Green and Rich'd Montgomery	Sangerfield, N. Y. .	Sept. 30, 1831
Bark mill	James T. Gifford	Veteraa, N. Y.	Feb. 27, 1832
Bark mill	Daniel Humbert and Geo. Downs.	McConnelstown, Pa.	Mar. 27, 1832

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN MOVED.
Bark mill	John Trask, Ahiman Seabury, & William Young	Sangerfield, N. Y. . . .	April 17, 1833
Bark mill	Charles Parker	Meriden, Conn.	Nov. 25, 1837
Bark mill	Backus A. Beardsley .	Sangerfield, N. Y. . . .	Feb. 4, 1843
Bark mill	Anson P. Norton and Morris Owen	Sangerfield, N. Y. . . .	June 25, 1845
Bark mill	Amos Lindsey	Canton, Me.	Dec. 26, 1845
Bark mill *	Milo J. Whiton, ass'ee of Isaiah Scudder. . .	Broadalbin, N. Y. } Plattsville, N. Y. }	Oct. 25, 1845
Bark mill, breaking and grinding.	Rich'd Montgomery & Lewis W. Harris . . .	Sangerfield, N. Y. . . .	Aug. 12, 1840
Bark mill, cast iron.	William Torrey	Westbrook, Me.	Sept. 13, 1827
Bark mill, cutting.	Isaac Warrell	Pennsylvania	Mar. 17, 1802
Bark mill, cutting and dye wood .	Ob. Pease and Asher Donalds	Norfolk, Ct.	Mar. 18, 1808
Bark mill for grinding tanners' bark	Mather Beecher	Remsen, N. Y.	Sept. 27, 1844
Bark, shaving, tanners'	W. and J. Goodwin. . .	Lebanon, Ct.	Oct. 16, 1815
Bevel gear, universal	John Lewis	Burlington, Vt.	Nov. 29, 1838
Bolting cloths, securing to the reel	George M. Elliot. . . .	Hagerstown, Md. . . .	Mar. 19, 1834
Bolt, flour.	Robert C. Mauck. . . .	Honeyville, Va.	Dec. 26, 1845
Bolting flour, machine for.	Elisha S. Snyder. . . .	Charlestown, Va. . . .	May 2, 1846
Bolts for bolting flour.	Ryburn Buchanan . . .	Sullivan co., Tenn. . .	July 24, 1844
Bruising, beating, and cutting sub- stances	Adam Britz	Philadelphia, Pa. . . .	July 18, 1816
Cattle mill.	La Paype (Le Aine) . .	Baltimore, Md.	Nov. 4, 1805
Chain frame.	David Leslie	New York.	Nov. 19, 1827
Chain, preventing slipping.	James Cooper	Augusta co., Va. . . .	June 17, 1823
Chocolate, grinding.	Geo. W. Waite.	Baltimore, Md.	June 25, 1836
Chocolate, moulding.	James Mathews	Baltimore, Md.	June 25, 1836
Cider mill.	Timothy Showerman. .	Covington, N. Y. . . .	July 20, 1825
Cider mill.	Moses Bliss	Pittston, Me.	April 21, 1829
Cider mill.	Charles Rice	Barre, Mass.	Nov. 11, 1830
Cider mill.	Nathan Booth.	Cheshire, Ct.	July 12, 1834
Cider mill.	Christian Sheaffer. . .	Lebanon, Pa.	Mar. 19, 1836
Cider mill.	Elias Jenkins	Harmony, Pa.	May 17, 1836
Cider mill, cast iron	Philip Pryer	Genesee co., N. Y. . .	May 29, 1835
Cider mill, portable.	Frederick Fredley. . .	Sugar Valley, Pa. . . .	Aug. 3, 1838
Cider mill, and press, horse power	Ozias Pettibone. . . .	Hartford, Conn. . . .	Mar. 1, 1815
Cider mill and press.	Daniel Reed.	Easton, Mass.	Mar. 3, 1829
Cider mill and press.	Uri Emmons.	New York.	June 31, 1829
Cider mill and press.	Daniel Pride	Potsdam, N. Y.	July 11, 1829
Cider mill and bark mill.	Isaac Quintard	Stansfield, Ct.	April 5, 1806
Coffee mill	Thomas Bruff, sr. . . .	Maryland.	Jan. 8, 1798
Coffee mill	Increase Wilson. . . .	New London, Ct. . . .	Mar. 6, 1818
Coffee mill	Burrows Smith. . . .	Cincinnati, Ohio. . . .	June 9, 1818
Coffee mill	J. Sizer, adm'r of Zach. Waterhouse	New London, Ct. . . .	June 12, 1818
Coffee mill	James Carrington. . .	Wallingford, Ct. . . .	April 3, 1829
Coffee mill	Ammi Clark	Berlin, Ct.	Aug. 14, 1833
Coffee mill	C. W. Peckham. . . .	New Haven, Ct. . . .	April 13, 1836
Coffee mill	Hiram Twiss.	Meriden, Ct.	June 19, 1837
Coffee mill	E. Morse and C. Put- nam	Knoxville, Tenn. . . .	Sept. 2, 1835
Coffee mill	John Rittenhouse. . .	Germantown, Pa. . . .	July 2, 1839
Coffee mill	John Luther	Warren, R. I.	Aug. 11, 1843
Coffee mill	Jesse Fitzgerald. . . .	New York.	June 25, 1845
Coffee mill	Beriah Swift	Washington, N. Y. . .	Aug. 16, 1845
Coffee mill, &c., constructing . . .	Lawreston R. Living- ston & Calvin Adams	Pittsburg, Pa.	Sep. 25, 1840
Coffee mill, double	Thos. H. Witherby & Joseph Torrey	Milbury, Mass.	July 17, 1832
Coffee mill, and pepper	David Richmond. . . .	McArthurstown, O. . .	Oct. 14, 1835
Coffee-mill, and spice mill.	Amasa Sizer	Cheshire, Ct.	Dec. 22, 1831

* Antedated April 25, 1845.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Coffee mill, and spice mill	Edmund Parker and Herman M. White..	Meriden, Ct	June 22, 1832
Coffee mill, and spice mill.....	Ammi Clark	Berlin, Ct	July 30, 1832
Cog wheel, suspended by machi- nery	James Cooper	Staunton, Va	Mar. 22, 1836
Cooler, flour	Hebard, Catlin, & Abell	Pomfret, N. Y	May 22, 1835
Cooler, flour	Josiah Pope	Windham, Me	Feb. 5, 1836
Cooling flour, worm for	John Smelzer	Adam county, Va ..	May 6, 1818
Cooler, sifter, grain, and berries..	Armstrong and King ..	New York	May 9, 1835
Corn breaker	Webber Furbish	Hallowell, Me	Mar. 15, 1833
Corn and corn bobs, breaking and grinding	James & Wm. Murray	Baltimore, Md	Feb. 12, 1842
Corn crasher	Samuel K. Gaunt	Greenville, Tenn ..	May 25, 1827
Corn, grinding	Jarvis Webster	Philadelphia, Pa	July 31, 1826
Corn, grinding, and cotton seed ..	James Martin	Petersburg, Va	May 16, 1835
Corn, grinding, on the cob	William Mayo	Henrico, Va	May 15, 1812
Corn, grinding, and crushing	Andrew P. H. Jordan ..	Madisonville, Tenn.	Oct. 28, 1835
Corn, grinding, in the ear	Thomas Briggs	E. Bloomfield, N. Y.	Jan. 10, 1834
Corn, grinding, by hand or horse power	Benjamin Hinkley ..	New York	Mar. 10, 1834
Corn, grinding, and shelling	Levi Stevens	New York	May 8, 1804
Corn, grinding, and shelling	Samuel Fowkes	Catskill, N. Y	May 4, 1825
Corn, grinding, and shelling	Geo. M. Weaver	Montgomery co., Pa.	June 12, 1835
Corn, grinding, and shelling	S. Slater & S. Noblit ..	Philadelphia, Pa	May 12, 1804
Corn, grinding, and shelling, and family mill	Ezra Bond	Mendon, N. Y	June 13, 1831
Corn, grinding, and shelling, and thrashing	Daniel Mullier	Worcester, Ohio	Jan. 24, 1832
Crank, anti-friction	Benj. L. Oliver	Salem, Mass	Mar. 9, 1831
Crank, wheel	James Stedwell, 3d ..	Carmel, N. Y	Nov. 25, 1833
Crank, wheel motion	James Wallace	Columbia, S. C	Sept. 25, 1824
Cylinder, multiplying, hollow ..	Thomas Powell	New York	Dec. 3, 1813
Dog power	Anthony Tiernan	New York	April 27, 1818
Drums, soldering, strengthening factory	Luke N. Perry	Worcester, Mass	Jan. 23, 1839
Elevating grain by blowing	Jer. Bailey	Chester co., Pa	Mar. 5, 1810
Elevating grain	Jer. Bailey	Kennetts square, Pa.	June 19, 1812
Elevating meal, pump for	John Ewing and David Dickey	Oxford, Pa	Oct. 2, 1813
Elevator bucket	Nelson C. Staples	Lynchburg, Pa	June 29, 1833
Elevator bucket, or hopper boy ..	Samuel Walgemore	Washington, D. C ..	Feb. 22, 1812
Flaxseed, grinding	George L. Stearns	Boston, Mass	Aug. 17, 1838
Flaxseed, paints, &c., grinding ..	Archibald Cross and Ezra Brown	Cazenovia, N. Y	Feb. 4, 1830
Flour, bolting and dressing	John Hean	Annaville, Pa	Feb. 28, 1830
Flour mill	Jonathan Thompson ..	Ashtabula, Ohio	July 7, 1830
Flour, &c., manufacturing	Oliver Evans	Philadelphia, Pa	Dec. 18, 1796
Flour, &c., manufacturing	Jos. Rich	Madison co., N. Y ..	Jan. 27, 1812
Flour, manufacturing	Andrew D. Worman ..	Fredericktown, Md ..	July 23, 1841
Flour and meal, bolting	Wm. H. Akins	Berkshire, N. Y	Dec. 3, 1829
Flouring mills, combining smut with scouring stones	James Darling	Sparta, N. J	April 21, 1829
Flour, power, vibrating, for sepa- rating	Benj. Calver	Glastonbury, Ct	Oct. 6, 1830
Flour, preserving	William Wood, jr	St. Clairsville, Ohio.	Dec. 4, 1824
Flour, preserving	E. Hord & B. Brown- ing	Fleming county, Ky	Mar. 12, "
Frame work of mills	William S. Faram	Sussex county, Va ..	July 14,
Friction, cylinder, co-operating ..	John P. Sawin	Roxbury, Md	Jan. 24
Friction, preventing	Edward Mott	Philadelphia, Pa	Oct. "
Friction, reducing	John J. Reakers	Baltimore, Md	June 1
Friction, reducing, of axles	Isaac Cooper	Baltimore, Md	Sept. 2
Friction, reducing, in mill gudge- ons	Fred'k. Eichelberger ..	Croagerstown, Md ..	Jan. 2

* Renewed Dec. 28, 1833. † Renewed January 21, 1808, by Congress

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Friction rollers.....	David Baldwin.....	Queensbury, N. Y....	Oct. 1, 1830
Friction rollers.....	James D. Cobb.....	Lebanon, Ohio.....	June 22, 1832
Friction rollers.....	George Danforth.....	Centreville, Ill.....	May 17, 1833
Friction rollers.....	Benj. Stancliffe.....	Philadelphia, Pa.....	Dec. 31, 1833
Friction rollers.....	Isaac Clowes.....	Norfolk, Va.....	Sept. 9, 1834
Friction rollers*.....	Rollin Dickinson and S. G. Merriman....	Southington, Ct.....	Mar. 26, 1838
Gearing, for driving machinery..	Jesse Urmy.....	Wilmington, Del....	Feb. 6, 1838
Gearing mills.....	Claverious Coleman..	Barry's Bridge, Va..	Aug. 27, 1835
Grain, cleaning, scouring and con- veying, cooling, bolting.....	Aaron Bull.....	Caroline, N. Y.....	Jan. 16, 1840
Grain, shouldering machines.....	John Kinman.....	Mifflinsburg, Pa.....	Mar. 15, 1834
Grinder, elliptical spindle.....	James Wheaton.....	Providence, R. I....	May 28, 1834
Grinding apples, &c.....	Thomas J. Wells.....	New York.....	Aug. 25, 1840
Grinding corn, &c., mills for.....	Francis Price.....	New York, N. Y....	Feb. 20, 1843
Grinding corn with cob, mill for..	James M. Miller.....	Mobile, Ala.....	Jan. 20, 1843
Grinding, corn and cob, mill for..	E. A. Knowlton.....	Columbia, S. C.....	Feb. 12, 1845
Grinding, corn and cob, mill for..	Jesse Urney.....	Wilmington, Del....	Oct. 25, 1845
Grinding, corn and cob, mill for..	James P. Ross.....	Lewisburg, Pa.....	Nov. 1, 1845
Grinding, corn and cob, mill for..	Samuel L. Starr.....	Mexico, Pa.....	April 4, 1844
Grinding and crushing corn, mill for.....	J. C. & C. B. Baldwin	Virginia.....	June 26, 1839
Grinding cylinders.....	Jonathan Bridges....	Troy, N. Y.....	July 24, 1832
Grinding grain, cylindrical mill for	Jacob Groat.....	Troy, N. Y.....	July 11, 1844
Grinding grain, mills for.....	Eli B. Nichols and Da- vid Marsh.....	Fairfield, Ct.....	Mar. 13, 1844
Grinding grain, portable mill for..	Erastus Arnold.....	Otego, N. Y.....	Mar. 9, 1844
Grinding grain, paint, drugs, &c...	William Broughton..	London, England....	April 25, 1846
Grinding mills.....	Josiah Platt.....	Bridgeport, Ct.....	Dec. 26, 1845
Grinding mills.....	George T. Walters....	Nicholasville, Ky...	Feb. 12, 1844
Grinding and pounding.....	Alexander D. Moore..	New Haven co., N. C.	Aug. 7, 1813
Grind stones, grinding tools.....	Charles Arthur.....	Keseeville, N. Y....	Aug. 26, 1845
Grist mill..... grinding tools...	Jona. Curtis.....	Philadelphia, Pa....	Aug. 24, 1797
Grist mill.....	Hadilard Chase.....	New York.....	Dec. 16, 1799
Grist mill.....	Benjamin Tyler.....	New Hampshire....	Feb. 20, 1800
Grist mill.....	George W. Holley....	Connecticut.....	Mar. 27, 1802
Grist mill.....	Jos. Copes.....	Georgetown, Del....	May 2, 1805
Grist mill.....	Ez. Hale.....	Haverhill, Mass....	Feb. 22, 1807
Grist mill.....	Chris. Hamaker.....	Lancaster, Pa.....	May 21, 1807
Grist mill.....	Rufus W. Adams.....	Marlborough, Vt....	Dec. 8, 1808
Grist mill.....	Jeremy Frisbie.....	Pennsylvania.....	June 30, 1810
Grist mill.....	Jos. Goulding.....	Leicester, Pa.....	Mar. 1, 1811
Grist mill.....	Abm. Sawyer.....	Chester, Vt.....	July 20, 1813
Grist mill.....	Eb. Bryant.....	New London, Ct....	Feb. 8, 1814
Grist mill.....	John Ormsby & Tho- mas Cohoon.....	Washington, D. C..	Jan. 4, 1816
Grist mill.....	Thomas Ellicot.....	Pennsylvania.....	Feb. 17, 1816
Grist mill.....	Samuel Brewster....	Middlesex, N. J....	Mar. 15, 1816
Grist mill.....	J. & D. Hascall.....	Likay, N. Y.....	Mar. 9, 1822
Grist mill.....	John Bicknell.....	Buckfield, Me.....	Dec. 11, 1822
Grist mill.....	B. & J. C. Langdon, and J. Traak.....	Troy, N. Y.....	Sept. 26, 1823
Grist mill.....	Jos. Ives.....	New York.....	Dec. 2, 1825
Grist mill.....	Francis Harris and J. Wilson.....	Albany, N. Y.....	June 9, 1826
Grist mill.....	Isaac Ryon.....	Bridgewater, Mass..	June 29, 1826
Grist mill.....	Jedediah Northorp..	Woodbridge, Ct.....	July 31, 1826
Grist mill.....	Moses Mendenhall..	Greensburg, N. C...	Oct. 20, 1826
Grist mill.....	Anthony Bencine....	Caswell, N. C.....	Jan. 16, 1827
Grist mill.....	William Benbow.....	Guilford co., N. C..	Jan. 19, 1827
Grist mill.....	Thomas Newman....	Guilford co., N. C..	Feb. 6, 1827
Grist mill.....	Benj. Oerman.....	Greensborough, N. C.	Feb. 28, 1827
Grist mill.....	Abraham Delap and Avery Eve.....	Guilford, N. C.....	May 31, 1827

* Antedated September 26, 1837. † Date of English patent July 21, 1845.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WEEKS EXPIRED.
Grist mill.....	Rob. S. Thomas.....	Rockingham, N. C.	June 4, 1827
Grist mill.....	Wm. W. Forward....	Hartford co., Md....	June 15, 1827
Grist mill.....	William A. Turner....	Plymouth, N. C.....	June 27, 1827
Grist mill.....	Washington Adams....	Guilford, N. C.....	July 18, 1827
Grist mill.....	Avery Coe & John Coe	Guilford, N. C.....	July 21, 1827
Grist mill.....	James Robinson.....	Buckskin t'nship, O.	Dec. 11, 1827
Grist mill.....	William L. Taylor....	McMinn, Tenn.....	Jan. 28, 1828
Grist mill.....	Samuel Holland.....	Hanover, O.....	Mar. 1, 1828
Grist mill.....	Admiral Warren.....	Saugerties, N. Y....	Mar. 12, 1828
Grist mill.....	Jos. Crail.....	Warren, Ohio.....	June 19, 1828
Grist mill.....	Reuben Medley.....	Bloomfield, Ken....	Sept. 5, 1828
Grist mill.....	J. Smith & Wm. Sapp	Mount Vernon, O....	Sept. 9, 1828
Grist mill.....	Thomas Baker.....	Statesburg, S. C....	Jan. 21, 1829
Grist mill.....	Benjamin M. Kemp....	Fort Plain, N. Y....	Jan. 31, 1829
Grist mill.....	William Parkinson....	Wheeling, Va.....	July 31, 1829
Grist mill.....	Job Wickersham and		
	T. Grozer.....	E. Fairfield, Ohio....	Aug. 29, 1829
Grist mill.....	Mark L. Chase.....	Frankport, Me.....	Dec. 23, 1829
Grist mill*.....	Jesse C. Smith.....	Lacon, Ill.....	Jan. 9, 1830
Grist mill.....	Increase Wilson.....	New London, Conn...	Feb. 23, 1830
Grist mill.....	Aaron Porter.....	New London, Ind....	Mar. 10, 1830
Grist mill.....	Charles Langford....	Claridon, O.....	July 8, 1830
Grist mill.....	Ephraim Griswold....	Truxton, N. Y.....	Oct. 16, 1830
Grist mill.....	Elisha Bigelow.....	Georgetown, D. C....	Feb. 11, 1831
Grist mill.....	Jos. Yeamans.....	Ashtabula, O.....	Mar. 18, 1831
Grist mill.....	John F. Anderson....	Louisville, Ky.....	May 3, 1831
Grist mill.....	John P. Phipps and		
	John Holliday.....	Wilmington, Del....	May 12, 1831
Grist mill.....	In. Ambler, jr., & D.		
	C. Ambler.....	New Berlin, N. Y....	June 13, 1831
Grist mill.....	Jehiel W. Dart, Wil-		
	lard Webster, & Hir-		
	Webster.....	Truxton, N. Y.....	July 20, 1831
Grist mill.....	Ezra Brees.....	Kingston, Pa.....	Sept. 28, 1831
Grist mill.....	Gideon Hotchkiss....	Windsor, N. Y.....	Jan. 27, 1832
Grist mill.....	Amos Barnes.....	Colesville, N. Y....	April 27, 1832
Grist mill.....	Oliver N. May.....	Hancock, N. Y.....	May 5, 1832
Grist mill.....	Asahel Bacon.....	Windsor, N. Y.....	June 4, 1832
Grist mill.....	Joseph C. Gentry....	Philadelphia, Pa....	July 14, 1832
Grist mill.....	D. Parmlee and J. C.		
	Shoemaker.....	Kingston, Pa.....	April 16, 1833
Grist mill.....	Luther Olds.....	Osego, N. Y.....	May 18, 1833
Grist mill.....	Moses W. Chapman....	Girard, Pa.....	June 1, 1833
Grist mill.....	Reuben Kendall.....	Wilkes county, Ga...	Nov. 19, 1833
Grist mill.....	Adna L. Norcross....	Hallowell, Me.....	Dec. 21, 1833
Grist mill.....	Joseph Grant.....	Providence, R. I....	Aug. 19, 1834
Grist mill.....	S. H. Handy, John Al-		
	bee, & E. B. Cutts..	Hallowell, Me.....	June 6, 1834
Grist mill.....	H. P. Nuckols & Poun-		
	cey Nuckols.....	Barren county, Ky..	Jan. 21, 1835
Grist mill.....	John R. Sleeper.....	Philadelphia, Pa....	Jan. 27, 1835
Grist mill.....	Adna L. Norcross....	Hallowell, Me.....	Aug. 20, 1835
Grist mill.....	Phillip Hauser.....	Cincinnati, Ohio....	Nov. 7, 1835
Grist mill.....	Owen Moses.....	Malone, F. co. N. Y.	Sept. 26, 1835
Grist mill.....	Samuel Hyde.....	Malone, N. Y.....	Nov. 26, 1835
Grist mill.....	W. & J. McCroight..	Winnaborough, S. C.	Feb. 5, 1836
Grist mill.....	Oliver Wyman.....	Watertown, Mass...	July 1, 1836
Grist mill.....	Oliver Wyman.....	E. Cambridge, Mass	Dec. 20, 1837
Grist mill.....	Perry Davis.....	N. Providence, R. I.	May 17, 1838
Grist mill.....	O. P. Stevens, assignee		
	of Ezra Goodell....	Port Lawrence, O....	Oct. 10, 1838
Grist mill.....	Elijah S. Curtis.....	Boston, Mass.....	Nov. 23, 1837
Grist mill.....	David D. Wagener....	Pittsburg, Pa.....	Jan. 8, 1839
Grist mill.....	Oliver Wyman.....	E. Cambridge, Mass	April 18, 1839

* Reissued September 25, 1837.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Grist mill.....	Henry Pearce.....	Cincinnati, Ohio....	July 28, 1839
Grist mill.....	Edward Gray.....	Ulysses, N. Y.....	Mar. 25, 1840
Grist mill.....	Ezekiel G. Ward....	New York.....	Feb. 20, 1841
Grist mill.....	Josiah Platt.....	Weston, Ct.....	Oct. 9, 1841
Grist mill.....	Clark B. Gregory....	Danbury, Ct.....	Feb. 16, 1843
Grist mill.....	Josiah Platt.....	Weston, Ct.....	Sept. 28, 1843
Grist mill.....	J. Ansell & J. Gallery.	Brooklyn, N. Y....	Aug. 21, 1844
Grist mill, (on Barker's).....	James Rumsey.....	Berkley co., Va....	Aug. 26, 1791
Grist mill, (on Bicknell's).....	Moody Stockman....	Hampton, N. H....	April 18, 1826
Grist mill, (on Bicknell's).....	James Bemis.....	Worcester, Mass....	Nov. 17, 1826
Grist mill, bush for.....	George M. Copeland..	Geneva, Ohio.....	Oct. 11, 1841
Grist mill, cast iron.....	Hy. Bailey.....	Hartford, Ct.....	May 14, 1825
Grist mill, and chopping grain...	Pierson Cope.....	Washington t'p, Pa.	Aug. 17, 1835
Grist mill, and coffee mill.....	Jacob Stroub.....	Charleston, S. C....	Sept. 6, 1833
Grist mill, conical.....	Daniel and John Fitzgerald.....	New York.....	Oct. 30, 1834
Grist mill, conical.....	Samuel Sheldon.....	Cincinnati, Ohio....	Sept. 11, 1841
Grist mill, constructing.....	Elisha Holton.....	Westminster, Vt....	April 3, 1835
Grist mill, constructing, bales and drivers for.....	Ezra R. Benton.....	Ohio city, Ohio....	Mar. 31, 1840
Grist mill, crusher and sheller...	John G. Morse.....	Randolph t'p, N. C.	Mar. 20, 1827
Grist mill, for cutting.....	William Gerriah....	Portsmouth, N. H..	Jan. 11, 1836
Grist mill, cylinder.....	Harvey W. Pitts.....	Wilsonville, Ala....	July 1, 1840
Grist mill, double centred.....	Benjamin Dearborne..	Massachusetts.....	April 30, 1799
Grist mill, family.....	David Flagg, jr.....	Gardiner, Me.....	Feb. 23, 1826
Grist mill, family.....	Peter M. Wright.....	New York.....	April 14, 1835
Grist mill, and flour.....	Isaac Straub.....	Northumb'd co., Pa.	May 9, 1834
Grist mill, gate pressure.....	Seaver Prentiss.....	New York.....	June 4, 1832
Grist mill, and grinding paints...	Hy. Averill.....	Richland, N. Y....	April 30, 1829
Grist mill, and grinding paints & snuff.....	William S. Johnson..	New York.....	June 26, 1835
Grist mill, and grinding paints & plaster.....	Cephas Manning.....	Littleton, Mass....	April 2, 1835
Grist mill, (on Haskins').....	William Coleman....	Euclid, Ohio.....	Feb. 25, 1830
Grist mill, horizontal.....	Israel Kelsey.....	Hartford, Ct.....	Aug. 25, 1809
Grist mill, horizontal.....	Jonathan Reynolds..	America, N. Y.....	Mar. 15, 1827
Grist mill, and hulling.....	John Wilson.....	Manlius, N. Y....	Aug. 27, 1824
Grist mill, hulling cotton seed...	Barton N. Fyler.....	Bradford, Vt.....	April 15, 1830
Grist mill, increasing the power of	Robert Burns.....	Mifflin co., Pa....	June 20, 1822
Grist mill, iron.....	J. W. & C. Post.....	Washington, D. C..	April 11, 1829
Grist mill, (on Mendenhall's)....	S. Lawing & J. Monteith.....	Statesville, N. C....	June 11, 1827
Grist mill, percussion.....	Fones McCarthy.....	Demopolis, Ala....	Feb. 24, 1845
Grist mill, portable.....	Henry Weed.....	Sandwich, N. H....	Jan. 10, 1831
Grist mill, portable.....	Isaac Staub.....	Cincinnati, Ohio....	Feb. 18, 1840
Grist mill, pressure or weighted..	John Ambler, jr. & D. C. Ambler.....	New Berlin, N. Y..	Dec. 6, 1830
Grist mill, regulated.....	Jo. Quimby.....	Wilmington, N. C..	Feb. 3, 1812
Grist mill, and sawing, construct'g	Geo. & F. R. Baker..	Tuscaloosa, Ala....	July 7, 1835
Grist mill and saw mill combined.	Noah Porter.....	Boston, Mass.....	Nov. 17, 1831
Grist mill, scouring and hulling..	D. Parmalee and J. Moores.....	New Troy, Pa.....	June 12, 1832
Grist mill, screw.....	Jo. L. Miller.....	Brookfield, N. Y..	Mar. 28, 1810
Grist mill, self-stopper.....	Rob't McCormick, jr.	Augusta co., Va....	April 20, 1831
Grist mill, with small stones.....	Frederick Smith.....	Evans, N. Y.....	Mar. 18, 1835
Grist mill, and spiral water wheel	Alexander Temple....	Brookfield, Ohio....	Dec. 11, 1829
Grist mill, sugar loaf.....	Sid. & Portius Moore.	Mount Tirzah, N. C.	June 15, 1827
Grist mill, vertical, cylindrical foot	Samuel Fowkes.....	Catskill, N. Y....	Sept. 13, 1824
Grist mill, working.....	James Rumsey.....	Berkley co., Va....	Aug. 26, 1791
Gudgeon mill.....	Michael Withers.....	Strasburg, Pa.....	Aug. 24, 1813
Gudgeon, ink, and vertical axis...	John Andrews.....	Dinwiddie co., Va..	Aug. 11, 1817
Gudgeon, friction rollers for.....	Martin C. Forrist....	Foxborough, Mass..	Nov. 16, 1841
Gudgeon, self-acting box for.....	John Shugert.....	Elizabeth, Pa.....	April 1, 1842
Gudgeon, or step of mill spindles.	Jacob Staub.....	Georgetown, D. C..	May 4, 1841

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Hommony, machine for making.	Wm. Y. Singleton....	Springfield, Ill.....	April 25, 1846
Hommony mill.....	Nathan Read.....	Belfast, Me.....	May 8, 1890
Hommony mill.....	Robert Campbell.....	Martinsburg, Pa.....	April 9, 1897
Hopper blower.....	Thomas S. Barnum.....	Sharon, Ct.....	Jan. 18, 1810
Hopper filler, for bolting flour..	Abm. Hershe.....	Lancaster, Pa.....	Jan. 15, 1814
Horse mill.....	Ephraim Brown.....	.....	April 10, 1810
Horse mill.....	William Cromwell....	Accomack, Va.....	Dec. 14, 1816
Horse mill.....	William Sanford.....	New York.....	April 5, 1821
Horse mill.....	Admiral Warren.....	Saugerties, N. Y.....	April 15, 1826
Horse mill, lever.....	John Galbraith.....	Maury co., Tenn.....	Mar. 6, 1828
Horse mill, lever, by using weights	John Grannis.....	Cheshire, Ct.....	May 12, 1812
Horse power.....	Webb Hart.....	Accomack, Va.....	Jan. 22, 1817
Horse power.....	Benjamin Maltby....	New York.....	April 11, 1825
Horse power.....	Benj. S. Ridgway....	Charleston, S. C.....	Feb. 6, 1829
Horse power.....	George Page.....	Keene, N. H.....	Sept. 28, 1831
Horse power.....	Calvin Emmons.....	New York.....	Aug. 2, 1831
Horse power ^a	Thos. D. Burrall and Jehial F. Axtell.....	Geneva, N. Y.....	June 13, 1832
Horse power.....	Timothy Showerman..	Covington, N. Y.....	June 27, 1832
Horse power.....	Gilbert Griffin.....	Greene, N. Y.....	May 31, 1833
Horse power.....	S. S. Allen.....	Saratoga Sp'gs, N. Y.	June 23, 1833
Horse power.....	P. C. Curtis and Linus Yale.....	.....	.....
Horse power.....	Benj. D. Beecher....	Cheshire, Ct.....	Sept. 17, 1833
Horse power.....	John & Luke Hale....	Hollis, N. H.....	Dec. 23, 1833
Horse power.....	Jehial F. Axtell.....	Geneva, N. Y.....	Dec. 24, 1833
Horse power.....	J. Martineau, admin'r of Joel Eastman....	.....	.....
Horse power.....	Eliakim Briggs.....	Elbridge, N. Y.....	May 31, 1834
Horse power.....	Joseph B. Streeter....	Ft. Covington, N.Y.	July 12, 1834
Horse power.....	Sewell Gleason.....	Middlesex, N. Y.....	Aug. 26, 1834
Horse power.....	Sylvanus Leonard....	Westville, N. Y.....	Sept. 18, 1834
Horse power.....	William Emmons.....	Hampden, Me.....	Sept. 23, 1834
Horse power.....	Irby Jones.....	New York.....	Dec. 24, 1834
Horse power.....	William E. Arnold....	Natchez, Miss.....	Jan. 13, 1835
Horse power.....	C. Custer and Daniel Ponepacker.....	Chatham, Ct.....	Mar. 13, 1835
Horse power.....	Thomas Mitchell.....	Providence t'p, Pa..	Mar. 30, 1835
Horse power.....	Benjamin Wales.....	Newburg, N. Y.....	July 7, 1835
Horse power.....	Moses Davenport....	Hallowell, Me.....	Aug. 17, 1835
Horse power.....	Asa Trahern, Hy. He- berling, Wm. E. Lu- kens, & J. Heberling	Phillips, Me.....	Oct. 10, 1835
Horse power.....	Daniel Fitzgerald....	Harrison co., Ohio..	Oct. 28, 1835
Horse power.....	Samuel Newton.....	New York city.....	Oct. 19, 1836
Horse power.....	Dudley Marvin.....	Dayton, Ohio.....	Jan. 20, 1836
Horse power.....	Joseph Musten.....	New York city.....	Feb. 5, 1836
Horse power.....	Richard Skinner.....	Franklin co., Vt.....	Feb. 12, 1836
Horse power.....	Amos Adams.....	Williamson, N. Y..	Mar. 31, 1836
Horse power.....	Isaac Straub.....	Augusta, Me.....	May 6, 1836
Horse power.....	C. Coster and D. Pen- nypacker.....	Lewiston, Pa.....	May 14, 1836
Horse power.....	Rufus Porter.....	Up. Providence, Pa.	May 23, 1836
Horse power.....	Willard Whitman....	Billerica, Mass.....	June 11, 1836
Horse power.....	John Abbott.....	Haverhill, N. H.....	June 20, 1836
Horse power.....	Charles G. Gilbert....	South Reading, Mass	June 30, 1836
Horse power.....	Daniel Fitzgerald....	Leeds, Me.....	July 2, 1836
Horse power.....	Levi Rice.....	New York city.....	Oct. 19, 1836
Horse power.....	Levi Rice and David Congdon.....	Attleborough, Pa..	July 17, 1837
Horse power.....	Barnabas Langdon....	West Chester, Pa...	July 17, 1837
Horse power.....	Henry Smith.....	Troy, N. Y.....	July 19, 1837
Horse power.....	Benj. Hinkley.....	Bethel, Ohio.....	Oct. 6, 1837
Horse power.....	James Secor.....	Fayette, Me.....	Nov. 25, 1837
Horse power.....	.....	New York, N. Y.....	April 28, 1839

^a Disclaimer, Jan. 29, 1841.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Horse power.....	Miles C. Mix.....	Darby, N. Y.....	June 23, 1838
Horse power.....	Orrin Straight.....	Lyconing co., Pa...	Aug. 3, 1838
Horse power.....	Jerub A. Fay.....	Baltimore, Md.....	Oct. 10, 1838
Horse power.....	William E. Arnold...	Rochester, N. Y....	April 26, 1839
Horse power.....	Samuel S. Allen.....	Miamisburg, Ohio..	Jan. 10, 1840
Horse power.....	Geo. Streng & Jacob Rohrer.....	Lancaster, Pa.....	May 8, 1840
Horse power.....	Enoch Piper.....	Camden, Me.....	June 10, 1840
Horse power.....	Charles Hibbard.....	Guilford, N. H.....	Sept. 14, 1840
Horse power.....	Edmund Warren.....	New York.....	Jan. 5, 1841
Horse power.....	J. Francis Moore.....	Falmouth, Va.....	May 4, 1841
Horse power ^a	Samuel H. Little.....	Gettysburg, Pa.....	June 11, 1841
Horse power.....	Thomas J. Wells.....	New York.....	July 1, 1841
Horse power.....	Moses Davenport.....	Pittsburg, Pa.....	Sept. 4, 1841
Horse power.....	John Haw.....	Hanover co., Va.....	Mar. 15, 1845
Horse power.....	Richard Montgomery.	Waterville, N. Y....	April 10, 1845
Horse power.....	John R. Remington...	Lowndes co., Ala....	June 20, 1846
Horse power.....	Daniel Cary.....	Clarkson, N. Y.....	June 27, 1846
Horse power.....	Israel J. Richardson..	New York, N. Y....	Feb. 10, 1846
Horse power, and accelerating motion.....	Richard S. Schevenell.	Orangeburg, S. C...	Nov. 13, 1832
Horse power, or animal.....	James Cooper.....	Augusta co., Va.....	April 12, 1839
Horse power, or animal.....	William E. Arnold...	Chatham, Ct.....	May 7, 1831
Horse power, application of, to machinery.....	Daniel Woodbury ...	Weathersfield, Vt...	Aug. 26, 1846
Horse power, driving machinery.	Luke S. Rand.....	Townshend, Vt.....	Mar. 4, 1843
Horse power, driving machinery.	A. D. Childs.....	Rochester, N. Y....	May 6, 1844
Horse power, driving machinery.	Samuel B. Haines.....	Greensburgh, Pa....	Dec. 31, 1844
Horse power, endless chain.....	Amos Parker.....	Windham, Me.....	Aug. 30, 1838
Horse power, endless chain.....	Webber Furbish.....	Hallowell, Me.....	April 14, 1835
Horse power, endless chain.....	O. Badger.....	Cooperstown N. Y....	Oct. 15, 1836
Horse power, endless chain.....	Jacob G. Hall.....	Zanesville, Ohio....	Sept. 21, 1837
Horse power, endless chain.....	Aaron Palmer.....	Akron, N. Y.....	Sept. 22, 1837
Horse power, endless chain.....	Henry G. Hall.....	Putnam, Ohio.....	Sept. 28, 1837
Horse power, endless chain.....	Moses Davenport.....	Phillips, Me.....	July 10, 1839
Horse power, endless chain.....	Alonzo & William C. Wheeler.....	Chatham, N. Y....	July 18, 1841
Horse power, endless chain.....	John Kelly.....	Lewistown, Pa.....	Mar. 4, 1842
Horse power, endless chain.....	Isaac R. Lawrence...	Chatham, N. Y....	Oct. 7, 1842
Horse power, endless chain.....	Albert W. Gray.....	Middletown, Vt....	Oct. 26, 1842
Horse power, endless chain.....	Salmon Richard.....	East Poultny, Vt....	Oct. 28, 1843
Horse power, endless chain, band for.	John A. Pitts and Hiram A. Pitts.....	Livermore, Me.....	Aug. 15, 1834
Horse power, endless chain, and railway.....	Samuel Lane.....	Hallowell, Me.....	May 17, 1830
Horse power, endless floor.....	Orestes Badger.....	Cooperstown, N. Y....	Dec. 14, 1840
Horse power, endless floor.....	Jeremiah M. Reed ...	Middlefield, N. Y....	Jan. 30, 1841
Horse power, endless floor on.....	Luke Hale.....	Hollis, N. H.....	Jan. 16, 1845
Horse power, endless leather.....	Jonathan G. Stanley & James C. Howard..	Winthrop, Me.....	Jan. 16, 1835
Horse power, gearing for.....	Smith Gardnier.....	Auburn, N. Y.....	May 14, 1833
Horse power, inclined plane.....	Wm. G. Johnston ...	Bridgetown, N. J....	Oct. 4, 1834
Horse power, locomotive.....	John R. Sleeper.....	Philadelphia, Pa....	Oct. 30, 1834
Horse power, portable, or animal.....	Joseph C. Gentry.....	Philadelphia, Pa....	Dec. 14, 1839
Horse power, portable.....	Isaac Van Doren.....	Hopewell, tp., N. Y....	June 13, 1831
Horse power, portable.....	James H. Corey.....	Bethel township, O..	Feb. 27, 1832
Horse power, portable.....	David Flagg, jr.....	New York.....	Dec. 28, 1832
Horse power, portable.....	Charles M. Keller.....	Washington, D. C....	June 3, 1833
Horse power, portable.....	William Burk.....	Whitemarsh towns'p Pa.....	June 25, 1834
Horse power, portable.....	Smith Gardner.....	Rochester, N. Y....	Nov. 25, 1834
Horse power, portable.....	Samuel S. Allen.....	Saratoga spr'gs, N. Y.	April 3, 1835
Horse power, portable.....	John Brandon.....	Williamsport, Pa....	April 8, 1835
Horse power, portable.....	Israel J. Richardson..	New York.....	Aug. 26, 1843

* Reissued July, 1, 1841.

† Antedated Dec. 9, 1840.

‡ Disclaimer, Nov. 4, 1837.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Horse power, portable.....	Elihu H. Jaques.....	Springfield, Vi.....	May 16, 1845
Horse power, portable.....	Jesse Fitzgerald.....	New York, N. Y....	June 16, 1846
Horse power, portable, frame work of.	John A. Nelson & Jas. P. Ross.....	Lewisburg, Pa.....	June 30, 1837
Horse power, tread wheel for....	Alanson Coats.....	Truxton, N. Y.....	Jan. 23, 1833
Horse power, portable, master wheel of.....	John A. Taplin.....	Hammond, N. Y....	Dec. 30, 1841
Horse powers, power and motion of.....	James Leffel.....	Springfield, Ohio...	Aug. 20, 1845
Horse power, water or steam....	Robert Mitchell.....	Cynthiana, Ky.....	Oct. 10, 1829
Horse wheel, inclined.....	James B. Robinson...	Cincinnati, Ohio....	Oct. 14, 1816
Horse wheel, inclined, and water.	Lee Wheeler and T. Powell.....	Coxackie, N. Y.....	Dec. 6, 1822
Horse wheel, inclined.....	John Bradford.....	Lexington, Ky.....	May 14, 1824
Horse wheel, inclined.....	Elias Holliday.....	Schoharie, N. Y.....	May 6, 1826
Horse wheel, inclined.....	Moses Isaacs and John Wilbank.....	Philadelphia, Pa....	Oct. 14, 1817
Horse wheel, inclined.....	N. H. Shaw.....	Charlotte Hall, Md.	Oct. 9, 1824
Horse wheel, vertical.....	John A. Morton.....	Baltimore, Md.....	July 21, 1815
Horse wheel, vertical.....	John M. Tilford.....	Rutherford co., Ten.	Aug. 7, 1820
Horse wheel, vertical.....	J. Keller & S. J. Burt.	Cincinnati, Ohio....	April 23, 1824
Journals, preventing from heating	Elisha Reid.....	Columbus, Ga.....	May 25, 1844
Meal, cooling, and conveying up.	F. G. Saltonstall....	North Carolina.....	Aug. 21, 1801
Machinery, governor for regulating the movements of mill wheels..	Henry Burt.....	Boston, Mass.....	Aug. 31, 1844
Mill.....	John Harman, jr....	New York.....	Mar. 30, 1836
Mill.....	J. F. Ostrander.....	New York, N. Y....	April 25, 1846
Mill, bark, grain, &c., grinding..	Joseph Birely.....	Frederick, Md.....	July 11, 1842
Mill bush*	Jacob Aulabaugh....	East Berlin, Pa.....	July 18, 1840
Mill bush.....	John Heck.....	Boonsboro', Md....	Mar. 26, 1844
Mill bush.....	Robert W. Wade....	Summit Point, Va....	May 25, 1844
Mill, tide.....	John B. Ross.....	New York.....	Nov. 9, 1844
Mill bushing and keeping the same close to the spindle†.....	Elisha W. Welsh....	Paris, Va.....	Jan. 28, 1840
Mill bush, self-regulating and self-oiling.....	Samuel Moore.....	Chambersburg, Pa...	April 8, 1840
Mills for cracking and grinding..	William Beal, jr., and B. S. Hale	Norway, Me., and Lowell, Mass.....	Dec. 17, 1846
Mill, crushing hard substances...	James Rowe.....	Athens, Ala.....	April 24, 1840
Mill, cylinder for granulating corn powder, bark.....	Increase Wilson.....	New London, Ct....	July 23, 1841
Mill feed, machine for dusting after bolting.....	Edward Bradfield....	Rochester, N. Y....	Sept. 15, 1846
Mill, grinding all kinds of grain..	Justin Ware.....	Farmington, Del...	July 20, 1842
Mill for hulling cotton seed.....	Jabez Smith.....	Petersburg, Va.....	Mar. 15, 1845
Mill machinery.....	Lewis Valcourt.....	Louisville, Ky.....	June 25, 1805
Mill machinery.....	Michael B. Poitiaux..	Richmond, Va.....	May 20, 1830
Mill machinery.....	Augustus Sawyer....	Hopewell, N. Y....	Oct. 1, 1830
Mill, metallic.....	Joseph C. Gentry....	Dayton, Ohio.....	Mar. 18, 1836
Mill, metallic file, furrowing, dressing.....	Samuel G. Reynolds..	Providence, R. I....	Mar. 18, 1835
Mill, paint.....	Joseph W. Webb.....	Mount Morris, N. Y.	Feb. 15, 1839
Mill, portable.....	Jesse Fitzgerald.....	New York, N. Y....	Sept. 12, 1846
Mill spindle, oiling and protecting from dirt.....	Jesse Hubbard.....	Watertown, Ct.....	April 8, 1840
Mill, spindles for.....	Joseph C. Gentry....	Dayton, Ohio.....	Sept. 25, 1839
Mill spindle and trundle head of..	Elbridge G. Potter...	Lebanon, Ohio.....	July 18, 1840
Mill stones.....	William Miller.....	Lampeter, Pa.....	Aug. 15, 1811
Mill stones.....	David Philips.....	Jefferson co., Miss..	April 3, 1829
Mill stones.....	John Clyde.....	Crawford co., Pa....	July 27, 1831
Mill stones.....	Benjamin Myers.....	Chambersburg, Pa..	Sept. 28, 1831
Mill stones.....	David Stern.....	Vanderburgh co., Ind	Jan. 5, 1832
Mill stones.....	James Prestow.....	Auburn, N. Y.....	Feb. 12, 1833
Mill stone.....	Elisha S. Snyder.....	Charlestown, Va....	Feb. 10, 1846

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Mill stones.....	Joseph H. Burrows..	Cincinnati, Ohio....	April 23, 1849
Mill stones, annular.....	John Morely.....	New York.....	Nov. 28, 1839
Mill stones, balancing.....	Mark L. Chase.....	Baltimore, Md.....	June 13, 1831
Mill stones, bed.....	William Bennet.....	Chesterville, Me.....	Oct. 25, 1832
Mill stones, burr for.....	Oliver Evans.....	Pennsylvania.....	May 28, 1796
Mill stones, bush.....	Nathan Taylor.....	Urbana, N. Y.....	July 23, 1827
Mill stones, casting faces of.....	Grafton Manter.....	Londonderry, N. H.....	Dec. 8, 1818
Mill stones, concave and convex.....	J. Sawyer and E. Clark	Royalston, Mass.....	Mar. 18, 1826
Mill stones, cooling.....	Austin Taylor.....	Littleton, N. H.....	Mar. 31, 1836
Mill stones, dressing.....	Chas. Wolverson and Benj. Ridgway, jr..	Morrisville, Pa.....	May 24, 1811
Mill stones, dressing.....	Leonard Norcross.....	Livermore, Me.....	May 6, 1823
Mill stones, dressing.....	John Keefer.....	Williamsport, Pa.....	Jan. 13, 1832
Mill stones, dressing, and cooling flour.....	Jacob B. Mirick.....	Manlius, N. Y.....	Aug. 10, 1833
Mill stones, dressing.....	Isaac W. Elmore.....	Lyons, N. Y.....	Sept. 25, 1834
Mill stones, dressing.....	David P. Napier.....	Casey county, Ky.....	Sept. 18, 1835
Mill stones, dressing of portable.....	Nathan Jacobs.....	Newark, Ohio.....	Mar. 11, 1837
Mill stones, dressing, and laying the runners of.....	Charles Vest.....	Stokes county, N. C.....	Oct. 2, 1838
Mill stones, dressing.....	Shadrach Trumbull..	Suffield, Ct.....	Aug. 2, 1839
Mill stones, dressing.....	Robert M. Smith.....	Rutherford co., Tenn.....	Feb. 8, 1840
Mill stones, dressing with ventila- tors for cooling the flour, &c.....	Pendleton Cheek.....	Flat Rock, Ga.....	Aug. 21, 1841
Mill stones, facing.....	Robert C. Stevens.....	Hackett's town, N. J.....	Feb. 18, 1834
Mill stones, facing, furrowing and dressing.....	Zebulon Cheesebrough	Alden, N. Y.....	Dec. 10, 1838
Mill stones, hanging and using.....	James McDuffee.....	Bradford, Vt.....	Feb. 21, 1833
Mill stones, machinery for raising.....	Thomas Reynolds.....	West Fallowfield, Pa.....	Nov. 8, 1814
Mill stones, machine for tramming.....	Charles Carlisle and Ed. Estabrook.....	Norwich, Vt.....	Aug. 28, 1846
Mill stones, picking.....	Solomon Hodge and Jonathan Dorr.....	Washington, N. Y.....	Oct. 23, 1792
Mill stones, picks.....	Samuel Etheridge.....	Tecumseh, Mich.....	Mar. 2, 1836
Mill stones, porous composition for.....	Ezek. Cutter and Ste- phen Blanchard.....	Cincinnati, Ohio.....	Sept. 10, 1846
Mill stones, prevent from heating.....	Ferris Freleigh.....	Stow, Ohio.....	Mar. 26, 1845
Mill, sugar.....	Alfred Stillman.....	New York, N. Y.....	Aug. 8, 1846
Mill, sugar grinding.....	Nathan Sargent.....	Cambridgeport, Mas.....	Sept. 10, 1840
Mill, sugar, breaking and crumb- ling lumps of.....	Wm. Bent.....	Philadelphia, Pa.....	Feb. 3, 1838
Mill, universal, for grinding, hull- ing.....	James Bogardus.....	New York.....	July 29, 1841
Mill, vertical lathe.....	Elijah Skinner & John Webster.....	Sandwich, N. H.....	Aug. 26, 1831
Mill wheel.....	James Cowen.....	Massachusetts.....	Dec. 14, 1802
Mill wheel.....	John Staples, jr.....	New York.....	Feb. 17, 1804
Mill wheel.....	Ephraim Rew.....	Canandaigua, N. Y.....	Feb. 22, 1809
Mill wheel.....	Rufus Lathrop.....	W. Springfield, Mas.....	Nov. 12, 1812
Mill wheel, dresser.....	John Turk.....	Columbus, Pa.....	July 1, 1836
Mill wheel, double power.....	Luther Copeley.....	New Lebanon, N. Y.....	May 15, 1834
Mills, wind.....	Georgia Parker.....	Corinna, Maine.....	Sept. 11, 1845
Mill, wing gudgeon for.....	David Philips.....	Georgetown, Pa.....	Dec. 28, 1840
Mill works.....	Sam. Mans and J. Black	Pennsylvania.....	Feb. 18, 1809
Milling.....	Jesse Reeder.....	Lebanon, Ohio.....	Oct. 31, 1829
Motion, alternate, lateral.....	Nathan Moody.....	Hallowell, Mass.....	Feb. 19, 1819
Motion, communicating.....	William Simpson.....	Wilkes county, Ga.....	Feb. 19, 1818
Motion, communicating.....	Samuel Kilburn.....	Sterling, Mass.....	April 16, 1831
Motion, constant, from irregular.....	Jos. Kello.....	New York.....	April 1, 1815
Motion, changing.....	Otis Pettee.....	Newton, Mass.....	Mar. 15, 1835
Motion, double acting, reciprocating ^a	Christian Willson.....	Bedford, N. Y.....	Oct. 5, 1839
Motion, extending.....	William Kendall, jr.....	Waterville, Maine.....	Jan. 16, 1836

^a Antedated April 5, 1839.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Motion, fly-wheel or slide, to multiply.....	Charles Johnson.....	Amity, Illinois.....	Oct. 11, 1841
Motion in machinery, to be used as a substitute for cog-gearing, mode of increasing, reducing, and communicating.....	Frederick S. Barnard.....	New York, N. Y.....	Sept. 10, 1839
Motion, reciprocating.....	Benjamin Babbet.....	Bangor, Maine.....	Oct. 11, 1836
Motion, reciprocating.....	Charles A. Watson.....	Greene River, Ky.....	Aug. 1, 1838
Motion, rectilinear, into rotary.....	John Y. Savage.....	Raleigh, N. C.....	Aug. 9, 1823
Motion, rectilinear, into rotary.....	Archibald Smith.....	Rhinebeck, N. Y.....	Aug. 30, 1823
Motion, rectilinear, into rotary.....	A. W. Foster and J. Hugus.....	Greensburg & Hempford, Pa.....	April 26, 1819
Motion, rotary, from alternate.....	Peter Cooper.....	New York.....	April 6, 1820
Motion, rotary, double, horizontal.....	William Sullivan.....	Jefferson county, Ind.....	June 5, 1824
Mustard, preparation of flour.....	Samuel Hopkins.....	Rahway, N. J.....	Aug. 19, 1813
Mustard, preparation of flour.....	Samuel Hopkins.....	Philadelphia, Pa.....	May 31, 1817
Paint mill.....	Caleb Greene.....	Massachusetts.....	July 23, 1801
Paint mill.....	Jacob Cist.....	Pennsylvania.....	Dec. 3, 1803
Paint mill.....	John J. Wells.....	Hartford, Ct.....	June 13, 1809
Paint mill.....	Peter Breasted.....	Green county, N. Y.....	April 18, 1814
Paint mill.....	Elijah Skinner.....	Sandwich, N. H.....	Dec. 28, 1818
Paint mill, and drug.....	Isaac Eddy.....	Boston, Mass.....	Mar. 19, 1824
Paint mill, horizontal, cast iron.....	Origen Packard.....	Wilmington, Vt.....	Feb. 12, 1827
Paint mill.....	Allen Holcomb.....	Butternuts, N. Y.....	Mar. 14, 1827
Paint mill, trunked mouth.....	Samuel Cook.....	Mendon, Mass.....	Mar. 3, 1829
Paint mill, and grain*.....	James Bogardus.....	New York.....	Jan. 18, 1832
Paint mill, indigo.....	Oliver C. Harris.....	Waterville, N. Y.....	Mar. 15, 1832
Paint mill, dye stuffs.....	William G. Johnston.....	Philadelphia, Pa.....	May 3, 1832
Pendulum machine.....	Jos. Lefever.....	Providence, R. I.....	June 13, 1810
Pendulum to mills.....	Isaac Cobb.....	Walpole, N. H.....	Mar. 1, 1809
Pendulum mill.....	Solomon Thayer.....	Braintree, Mass.....	Oct. 9, 1811
Pendulum mill.....	William Grandin.....	Hector, N. Y.....	Jan. 6, 1813
Pendulum power.....	William W. McIntosh and W. Barnheart.....	Aurelius, Ohio.....	April 13, 1825
Pendulum power.....	Jedediah Tallman.....	Albany, N. Y.....	Mar. 31, 1808
Pendulum power, and lever.....	A. and C. Berry.....	Poughkeepsie, N. Y.....	Mar. 25, 1826
Pendulum motion, for machinery.....	Justin Jacob.....	Montreal, Canada.....	Dec. 29, 1826
Pendulum, regulator for water wheels.....	Nathan Scholfield.....	Montville, Conn.....	Feb. 11, 1833
Pendulum power.....	Abraham Wade.....	Eagletown, N. Y.....	Mar. 25, 1835
Plaster mill.....	Emanuel Kent.....	Baltimore, Md.....	Sept. 14, 1804
Plaster mill.....	William Brown.....	Baltimore, Md.....	Dec. 8, 1808
Plaster mill.....	A. Fettrow.....	York, Pa.....	May 28, 1818
Platform, flexible, for moving wheels.....	John Johnson.....	Charleston, S. C.....	Nov. 22, 1809
Potatoes, grinding.....	Jesse King.....	Florida, N. Y.....	Mar. 1, 1814
Power, air, water, and animal, combined.....	Thomas P. Codman.....	Boston, Mass.....	April 20, 1833
Power, augmenting, engine.....	Andrew Ochler.....	Eastonville, Va.....	Mar. 30, 1835
Power, compound, explosive.—See Class 4.			
Power, concentric.....	Henry Buel.....	Randolph, Tenn.....	May 3, 1833
Power, endless chain propeller.....	Lewis Chevrier.....	Philadelphia, Pa.....	July 11, 1836
Power, extending.....	Asa Bisbee.....	N. Yarmouth, Maine.....	Dec. 27, 1824
Power, gaining.....	Charles Redheiffer.....	Philadelphia, Pa.....	July 11, 1820
Power, graduating the velocities of moving bodies.....	Edwin W. Jackson.....	Albany, N. Y.....	Jan. 5, 1841
Power, helping.....	William Loomis.....	Ashford, N. Y.....	April 29, 1833
Power, machine.....	William Hosford, jr.....	Washington & nsp, O.....	Dec. 31, 1829
Power, mode of applying.....	Lorin Butts.....	Canterbury, Conn.....	July 9, 1823
Power, alternate motion for.....	Benjamin Elliot.....	Danby, N. Y.....	Oct. 4, 1834
Power, alternate motion, by contraction and expansion of metals.....	Hazard Knowles.....	Hartford, Conn.....	Sept. 8, 1836
Power, maintaining, to drive machinery.....	Steph. P. W. Douglass.....	Williamson, N. Y.....	May 22, 1841

* Extended fourteen years from January 18, 1846.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Power, manual, mode of driving machinery.....	Ammi West.....	Greene, Maine.....	Aug. 16, 1839
Power, and motion, by weights.— See Class VI, page 208.....	Peter Overt.....	New York.....	Dec. 18, 1813
Power, propelling, by cams and inclined planes.....	Philo C. Curtis.....	Utica, N. Y.....	May 29, 1835
Power, propelling machinery.....	William Stanton.....	Center township, Pa.	April 23, 1827
Power, propelling machinery....	T. D. Newsom and James C. Schule...	Nashville, Tenn....	Dec. 14, 1830
Power, propelling machinery....	T. D. Newsom.....	Nashville, Tenn....	Jan. 22, 1831
Power, propelling machinery....	A. Parkhurst and S. Bacon.....	Scriba, N. Y.....	April 11, 1831
Power, propelling machinery....	David Russell.....	Tuscumbia, Ala....	Oct. 27, 1835
Power, propelling machinery, call- ed lever and dead weights.....	Luke M. Edwards...	Trenton, Tenn.....	Mar. 2, 1835
Power, propelling machinery by weights.....	Cam Broyles.....	Tellico, Tenn.....	Oct. 19, 1827
Power, propelling machinery, or driving stones of flour and grist mills.....	Jeremiah Case.....	Sodus, N. Y.....	June 13, 1837
Power, propelling mills.....	Joseph G. Aldebert...	Opelousas, La.....	Dec. 29, 1831
Power, propelling mills by lever..	William Rhodes.....	Trenton, Tenn.....	April 27, 1832
Power, propelling mills by balance lever.....	L. H. Emmons and G. Upham.....	Massillon, Ohio....	May 16, 1833
Power, propelling mills by rolling and balance wheel.....	Joel Estes.....	Brownsville, Tenn..	Aug. 15, 1831
Power, propelling mills, support- ing chains.....	Billy Todd.....	Marietta, Ohio.....	Aug. 4, 1831
Power, propelling mills by weights	Obed R. Marston.....	Java, N. Y.....	Jan. 9, 1835
Power, safety engine, for machinery	Louis Marchand.....	Baltimore, Md.....	June 14, 1834
Power, self-motive.....	J. J. Giraud.....	Baltimore, Md.....	Mar. 31, 1836
Power, by weights.....	Elisha Turner.....	North Pownel, Me..	June 12, 1835
Pulleys, for cogs.....	William Shotwell....	New Jersey.....	June 24, 1800
Pulley, coupling and uncoupling, with their shafts.....	Peter Yates.....	Milwaukie, W. T....	April 25, 1843
Racket and wheel.....	Marcus B. Parmelee..	Newtown, Conn.....	Sept. 21, 1808
Regulator, wheel and spur gear..	John L. Sullivan.....	Boston, Mass.....	Feb. 28, 1818
Regulating speed, wheel for grist mills.....	S. H. Freeman.....	Cecilton, Md.....	May 17, 1836
Rice mill, steam.....	John L. Norton.....	Charleston, S. C....	Dec. 16, 1823
Sack shoulderer.....	Lewis Rice.....	Clarksborough, N. J.	Aug. 3, 1827
Screw mill.....	Oliver Evans.....	Philadelphia, Pa....	Feb. 14, 1804
Shafts, vertical, and spindles, pre- venting friction and adhesion in the steps or gudgeons of.....	Stephen Parsons.....	Edgecombe, Maine..	June 7, 1839
Sifter, meal.....	Daniel Homan.....	Brookhaven, N. Y..	Mar. 8, 1813
Sifter, grain, flour.....	John Nichols.....	Boston, Mass.....	April 29, 1829
Snuff mill.....	Thomas Baldwin....	Newcastle, Del.....	June 22, 1829
Smut, machine for cleaning from wheat.....	J. F. Howlet and F. M. Walker.....	Greensborough, N. C.	May 9, 1846
Smut machine.....	Henry Staub.....	Martinsburg, Va...	May 16, 1846
Smut machine.....	H. D. Reynolds.....	Mill Hall, Pa.....	July 28, 1846
Spindle and bush, for grist mill..	Jesse Barber.....	Pheps, N. Y.....	Feb. 28, 1834
Spindle and bush.....	Samuel Merchant....	Ohio county, Va....	July 22, 1834
Spindle and bush, ring and ball, for mills.....	Warren P. Wing....	Greenwich, Mass...	Feb. 20, 1835
Spindle and bush, self-tightening.	Henry Flinchbaugh..	Lampeter t'nship, Pa.	Oct. 19, 1838
Spindle, cast or wrought iron driver	James Barton.....	Millford, Pa.....	April 23, 1831
Spindle, cast iron, for mills.....	Wanton Rice.....	Athens, Pa.....	Oct. 1, 1823
Spindle, oil bush.....	Jesse Hinman.....	Clinton t'nship, Pa.	Mar. 2, 1835
Spindle, reducing friction.....	Frederick Fredley...	Logan township, Pa.	Mar. 10, 1834
Sugar mill.....	Jean B. Avelhe.....	New York.....	July 28, 1817
Tread wheel.....	Cornelius Watson....	Addison township, O.	Dec. 22, 1827
Tread wheel, railway.....	Benjamin Sutton....	Romulus, N. Y.....	Jan. 27, 1830

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Wedge, circular.....	Silas Underwood.....	Hardwick, Vt.....	July 22, 1831
Wheel, band, mode of hanging...	Isaac Straub.....	Lewistown, Pa.....	July 11, 1837
Wheel, chain.....	Henry Beidleman....	Washington co., Va.	Feb. 8, 1819
Wheel, chain.....	J. Hines and E. D. McCord.....	Sandy Hill, N. Y....	Nov. 20, 1829
Wheel, chain, right and left.....	Ralph Bulkley.....	New York.....	Oct. 8, 1821
Wheel, elliptical cog.....	Edmund C. Danly...	Fredonia, Ind.....	May 12, 1820
Wheel, or inclined circular plane.	Moses Isaacs.....	New York.....	Nov. 17, 1819
Wheel, inclined.....	George Lyman.....	Charles Parish, La..	Mar. 4, 1822
Wheel, mode of balancing.....	John Andrews.....	Litchfield, N. Y....	May 27, 1814
Wheel, and rest.....	Israel Johnson, jr....	Moriah, N. Y.....	May 1, 1829
Wheel, rolling on an inclined shaft	Stephen Merrick....	Madison co., N. Y...	Nov. 30, 1808
Wheel, running gear for mills....	Brittain Huckabby...	Huntsville, Ala....	Aug. 16, 1824
Wheel, screw gear.....	Charles Wortham....	Warren co., N. C....	April 24, 1826
Wheel, screw gear for bevel.....	Charles Neer.....	Waterford, N. Y....	Mar. 9, 1827
Wheel, spiral, perpendicular.....	Zach. Hiatt.....	Indiana.....	Aug. 20, 1819
Wheel, trailing.....	John Read.....	Lyme, Conn.....	Mar. 6, 1818
Wheel, within cylinders.....	James Sharpless....	New York.....	Sept. 15, 1801
Wheel, weathercock.....	Nathan T. Davis.....	Wilmington, Vt....	Jan. 9, 1834
Wind mill.— <i>See Wind mill, Class 11.</i>			
"Wry fly," for mill machinery..	Benjamin Tyler.....	Claremont, N. H...	Mar. 19, 1834

CLASS No. XIV.

LUMBER.

Including Machines and Tools for Preparing and Manufacturing; such as Sawing, Planing, Mortising, Shingle and Stave, Carpenters and Coopers' implements.

LIST OF PATENTS.

CLASS XIV.—LUMBER, including Machines and Tools for Preparing and Manufacturing ; such as Sawing, Planing, Mortising, Shingle and Stave, Carpenters, and Coopers' implements.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Auger	Christopher Hoxie...	Hudson, N. Y.	July 12, 1804
Auger	William Hall.	Champlain, N. Y. ...	Feb. 7, 1807
Auger	Martin Howe	New York	April 2, 1814
Auger	Joseph Brownell....	Otsego, N. Y.	May 16, 1815
Auger	J. H. Schreiner....	Philadelphia, Pa. ...	Aug. 17, 1826
Auger	William Jones.	Portsmouth, Va.	June 12, 1835
Auger	William Jones.	Portsmouth, Va.	June 15, 1835
Auger	Raymond French	Derby, Ct.	July 20, 1843
Auger, or bit	Ezra L'Hommedieu..	Saybrook, Ct.	Feb. 11, 1835
Auger, for boring square holes...	Cyrus Jackson.	Otsego co., N. Y. ...	Feb. 14, 1818
Auger, for boring and withdrawing	John Snyder	Tuscarora, N. Y.	June 1, 1830
Auger, for boring large holes....	Nicholas J. Lampman	Coxackie, N. Y.	April 8, 1835
Auger, double podded centrescrew	Ezra L'Hommedieu..	Saybrook, Ct.	July 31, 1809
Auger, double twisted*	E. Hommedieu, ass'ee of R. Watrous.	Chester, Ct.	July 24, 1838
Auger, gauge.	Abel Stowell	Massachusetts	Feb. 14, 1803
Auger, and gimlets.	Orville Percival	East Haddam, Ct. ...	Oct. 14, 1835
Auger, gimlets.	William N. Clark	Chester, Ct.	Jan. 31, 1845
Auger, handles for	Demmon C. Stone....	Warwarsing, N. Y. ...	Mar. 12, 1845
Auger, hollow	Abel Conant	Pepperville, Mass. ...	June 11, 1829
Auger, mining	Perkins Nichols.	Boston, Mass.	May 18, 1811
Auger, post.	Christopher Hoxie...	Hudson, N. Y.	July 26, 1824
Auger, pump, and spur bits....	Raymond French	Derby, Ct.	Nov. 11, 1834
Auger, serpentine	George Shetter.....	York, Pa.	Sept. 10, 1829
Auger, serpentine screw	George Shetter.....	York, Pa.	Mar. 21, 1831
Auger, set for wheel hubs.	Sheldon Caswell....	Windham, Ct.	Nov. 20, 1826
Auger, screw	Oliver Stetson & Wm. Sebree.	Georgetown, Ky ...	Dec. 11, 1810
Auger, screw	Judson Smith	Derby, Ct.	July 13, 1827
Auger, screw	David Bassett.	Derby, Ct.	Mar. 18, 1829
Auger, screw	Peregrine Williamson.	New York	Sept. 9, 1833
Auger, single twist.	Ezra L'Hommedieu..	Norwich, Ct.	July 17, 1816
Auger, single twist.	Ezra L'Hommedieu..	Saybrook, Ct.	Oct. 1, 1830
Auger, spiral screw	Alfred Newton.	Meriden, Ct.	Aug. 8, 1834
Auger, spiral screw, single twist..	Nathaniel C. Sanford.	Meriden, Ct.	Aug. 8, 1834
Auger, strap	Silas Gore.	Sheshequin, Pa.	July 20, 1825
Auger, tube	Robert Thomas.	Richmond co., N. C. ...	May 29, 1819
Auger, turning any number.	Hardin Branch	New York	Aug. 7, 1826
Auger, twisted screw, for boring guns.	Daniel Pettibone....	Philadelphia, Pa.	Feb. 12, 1814
Auger, twisted screw, for boring guns.	William Holmes....	Winchester, N. H. ...	April 4, 1820
Auger, twisting machine	Oliver Snow	Meriden, Ct.	May 13, 1834
Auger, for boring Artesian wells.	— See Class 9.		
Bathing tub, design for.	Jordan L. Mott.	New York	Aug. 17, 1843
Barrels, casks, &c.	John Hale.	Oakum, Mass.	June 21, 1828
Barrels, chamfering, bevelling, howelling.	Samuel Widerman...	Elysville, Md.	April 23, 1842
Barrels, and other coopers' ware, machine to be used in combina- tion with improved iron hoops in the manufacture of.	J. H. Bruner. Rob't M. Thompson..	Mitford, Ohio. Granville, Ohio.	Nov. 12, 1842

* Reissued July 30, 1845.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN GRANTED.
Barrels, kegs.	N. Goodall and N. Tainter.....	Watertown, N. Y..	June 9, 1828
Barrels.....	John Cole and Samuel Miller.....	Washington co., O..	Sept. 29, 1831
Barrels, manufacturer.....	John Squier.....	Salina, N. Y.....	Jan. 21, 1835
Barrels, machinery for making.....	Isaac Crosssett.....	E. Bennington, Vt..	July 1, 1844
Barrels, machinery for making.....	Horace Baker.....	McLean, N. Y.....	July 30, 1844
Barrels, machinery for making.....	William Trapp, jr.....	Dryden, N. Y.....	Oct. 1, 1845
Barrels, for oil.....	Barnabas Springer.....	Henry co., Ia.....	April 27, 1832
Barrels, vents for.....	Samuel Pike.....	Brattleboro', Vt.....	July 12, 1839
Bench.....	John Greenholt.....	Westminster, Md.....	June 9, 1818
Bench.....	Baruck Way.....	Ontario co., N. Y..	June 7, 1817
Bit stocks.....	Jeremy Taylor.....	Hebron, Ct.....	June 30, 1836
Bit stocks, composition.....	Augustus Phelps.....	Marlborough, Ct....	Oct. 10, 1829
Blocks of wood for paving, forming.....	Redwood Fisher, as'ee of Augustus, Count de Lisle.....	Paris, France.....	July 10, 1840
Blocks of wood for paving, sawing.....	Amaziah Nash.....	Calais, Me.....	Nov. 13, 1840
Blocks of wood for paving.—See Class 9.	Simon Willard.....	Cincinnati, Ohio....	May 9, 1832
Board, shearing.....	Abraham Plumb.....	Buffalo, N. Y.....	April 6, 1832
Boards, seasoning.....	John Webster.....	Gt. Barrington, Mass	May 1, 1810
Boring.....	Nathan'l Gillet & John Smith.....	Cazenovia, N. Y....	April 8, 1812
Boring, borer, compound slide and groove.....	Zebediah Holt.....	Chelmsford, Mass..	May 27, 1833
Boring, and framing timber.....	Jared Badger.....	Brooklyn, Ct.....	Jan. 20, 1838
Boring machine.....	James B. Coffin.....	Mohicanville, Ohio..	June 20, 1845
Boring machine*.....	Andrew Weikart.....	Green Village, Ohio..	Nov. 1, 1845
Boring machine for grooves.....	William Wright.....	Rochester, N. Y....	June 10, 1845
Boring machine and mortising.....	Reuben D. Roys, and Newell French.....	Detroit, Mich.....	Jan. 23, 1845
Boring machines to the article to be bored, method of securing.....	Peter Baylor.....	Salem, Ohio.....	July 1, 1844
Boring, mitre point.....	Benjamin Hall.....	Canaan, N. Y.....	Mar. 8, 1810
Boring and mortising.....	Job Wilkinson.....	Penfield, N. Y.....	May 28, 1825
Boring and mortising.....	John H. Power.....	Norwalk, Ohio.....	Jan. 31, 1837
Boring and mortising in chair seats.....	William L. Harley.....	Chagrin Falls, Ohio..	Aug. 14, 1840
Boring, perpendicular.....	Roger Selden.....	Massachusetts.....	July 7, 1806
Boring posts.....	Anthony Butler.....	Vermont.....	Nov. 7, 1811
Boring posts.....	James Corbett.....	Hanover, Pa.....	Dec. 21, 1819
Boring posts.....	William H. Shay.....	New York, N. Y....	Nov. 25, 1839
Boring pumps.....	Caleb Leach.....	Massachusetts.....	April 13, 1797
Boring pumps.....	Samuel Draper.....	Camillus, N. Y.....	Mar. 31, 1828
Boring and screw cutting machine.....	Aretus A. Wilder.....	Detroit, Mich.....	Jan. 31, 1845
Boring, ship carpenters.....	Benjamin Hall.....	Canaan, N. Y.....	Mar. 8, 1810
Boring and tenoning.....	Admiral Warren.....	Saugerties, N. Y....	April 17, 1826
Boring and tenoning.....	David Sperry.....	Colchester, Ct.....	April 18, 1827
Boring timber.....	J. Beckwith.....	Saratoga, N. Y....	Dec. 21, 1830
Boring timber for mortising.....	Benjamin Knight.....	Cranston, R. I.....	Oct. 23, 1834
Boring timber, machine for.....	Thomas J. Russell.....	Franklin Square, O..	Oct. 3, 1844
Boring timber.....	Moses Hubbell, as'ee of Roswell Hubbell.....	Sheffield, Ohio.....	Oct. 26, 1839
Boring wood.....	John B. Pell.....	New York.....	Mar. 2, 1836
Boxes, machinery for preparing wood for making.....	John H. Stevens.....	New York.....	Dec. 19, 1844
Boxes, sugar.....	Paul Pearson & John Howe.....	Alna, Me.....	April 15, 1838
Boxes, of wood.....	Harrison Holland.....	Belchertown, Mass..	April 13, 1838
Boxes, wooden, preparing wood for.....	Jacob Bentz.....	New York.....	Sept. 20, 1839
Boxes, wooden, turning.....	J. H. Stevens, as'ee of Chauncey E. Warner.....	New York, N. Y....	Jan. 18, 1840
Bangs, cutting.....	Alexander Donaldson.....	Salem, Mass.....	Jan. 15, 1818

* Antedated May 1, 1845.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Bunge, cutting.....	Robert Barlow.....	Philadelphia, Pa....	June 29, 1833
Bunge, cutting.....	George D. Gates.....	Hartford, Ct.....	May 2, 1835
Bunge, manufacturing.....	Robert Barlow.....	Philadelphia, Pa....	Dec. 1, 1833
Carpentering, art of.....	Jer. Bailey.....	Philadelphia, Pa....	April 7, 1837
Carving machine.....	Hezekiah Augur.....	New Haven, Ct....	Dec. 23, 1846
Casks.....	Joseph Little.....	Hillsborough, N. H.	July 25, 1818
Casks.....	Uri Emmons.....	Greene co., N. Y....	Jan. 8, 1823
Casks.....	Wm. & Mar. Adams.....	Ogden, N. Y.....	Jan. 24, 1828
Casks and barrel headings.....	Hiram Andrews.....	Canaan, Ct.....	Mar. 2, 1836
Casks, cutting heading for*.....	Lee Wells.....	Hartsville, N. Y....	Jan. 27, 1838
Casks, machine.....	Sumner King.....	Suffield, Ct.....	Mar. 23, 1836
Casks, machine for chamfering, crossing, and howelling.....	Philip Estis.....	Adrian, Mich.....	Dec. 3, 1846
Casks, steam, to making.....	Jonah Thompson....	Philadelphia, Pa....	Dec. 30, 1829
Clapboards, bevelling the ends of	Samuel W. Curtis....	Stoughton, Mass....	May 2, 1843
Clapboards, circular saw for.....	Robert Eastman and J. Jaquith.....	Brunswick, Mass....	Mar. 16, 1820
Clapboards, circular saw for.....	Jonathan Fudder....	Gorham, Me.....	Oct. 11, 1828
Clapboards, lath, staves, cutting..	Ebenezer Day.....	Grand Detour, Ill....	June 18, 1842
Clapboards, machine.....	Daniel Newton.....	Dalton, N. H.....	Jan. 31, 1833
Clapboards, from round logs.....	Herald Whitmore....	Worcester, Mass....	Aug. 26, 1831
Clapboards, sawing.....	E. Pray, E. Benjamin, & J. S. Stone.....	Maine.....	Dec. 28, 1824
Clapboards, sawing.....	Ebenezer Carleton & Solomon Whiting, jr	Bath, N. H.....	Mar. 25, 1830
Clapboards, sawing.....	Otis Parker and Daniel Parker.....	Hubbardst'wn, Mass	Dec. 24, 1834
Clapboards, sawing.....	Samuel Goss.....	Milford, N. H.....	June 3, 1837
Clapboards, sawing.....	Daniel Bartholomew..	Wolcott, Vt.....	July 8, 1843
Clapboards, sawing.....	Daniel Newton.....	Dalton, N. H.....	July 20, 1843
Clapboards, sawing.....	Crawford Tyler.....	Milford, N. H.....	Aug. 30, 1838
Clasps, in saw mill gates.....	Henry and Nelson Johnson.....	Erwin, N. Y.....	May 15, 1837
Coopering.....	Oliver Barber.....	Hartford, Ct.....	Jan. 8, 1810
Coopering.....	Horace Wright.....	Onondaga, N. Y....	Oct. 23, 1822
Coopering.....	Hiram Waters.....	Watertown, N. Y....	April 3, 1828
Coopering.....	Nathaniel Rider.....	Starbridge, Mass....	April 1, 1829
Coopering, working off tool.....	Melancthon Sutton..	Penfield, N. Y....	Sept. 9, 1835
Coopering, croes for.....	James F. Brodhead....	Kingston, N. Y....	Oct. 8, 1838
Corks, for bottles.....	James Barron.....	Hampton, Va.....	Jan. 13, 1819
Corks, cutting.....	Luther Hills.....	Boston, Mass.....	June 18, 1827
Corks, cutting.....	George Rawlings.....	Philadelphia, Pa....	Oct. 30, 1827
Corks, cutting.....	Samuel Sawyer.....	Boston, Mass.....	June 10, 1840
Corks, cutting.....	Charles R. Macy.....	Hyde Park, N. Y....	Oct. 31, 1840
Dovetailing boards.....	Ari Davis.....	Lancaster, Mass....	Sept. 6, 1833
Dovetailing and mortising.....	John Brainerd.....	Aurora, Ohio.....	Jan. 9, 1838
Dovetails, cutting square joint...	William Perrin.....	Lowell, Mass.....	Mar. 24, 1841
Dovetails and tenons, cutting.....	Thomas J. Wells.....	New York.....	July 8, 1841
Dowelling headings for coopers..	Ralph Hunt.....	Ontario co., N. Y....	Dec. 11, 1820
Dowelling instrument.....	William Bowhay.....	Philadelphia, Pa....	Oct. 14, 1816
Drawing knife.....	Edmund Richards....	Hingham, Mass....	June 28, 1836
Dye woods, cutting.....	Jedediah Richards, 3d	Norfolk, Ct.....	Aug. 13, 1810
Dye woods, cutting.....	Aaron Broad.....	Litchfield, Ct.....	June 9, 1814
Dye woods, cutting.....	Beriah Swift.....	Washington, N. Y....	Feb. 1, 1817
Dye woods, cutting.....	Elijah Converse.....	Dayton, Ohio.....	Jan. 10, 1821
Dye woods, cutting.....	H. Haight & E. White	Stamford, Ct.....	April 11, 1825
Dye woods, cutting.....	Ephraim Morris.....	Bloomfield, N. J....	Sept. 27, 1825
Dye woods, cutting.....	Merrit Hurd.....	Augusta, N. Y....	July 22, 1831
Dye woods, cutting.....	Lucius H. Mosely....	Poughkeepsie, N. Y	June 22, 1837
Dye woods, cutting and reducing.	Abner McMillen.....	Bedford, N. H.....	Dec. 26, 1837
Dye woods, cutting and shaving.	B. Swift.....	Washington, N. Y....	Aug. 10, 1836
Dye woods, cutting, and tan bark self feeding.....	Aaron Foster.....	Rochester, N. Y....	Dec. 9, 1828
Dye woods, rasping.....	Jesse Reed.....	Boston, Mass.....	June 8, 1808

* Antedated July 27, 1837.

† Extended 14 years from Jan. 14, 1833, by Congress, July 2, 1836.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Dye woods, rasping.....	Samuel Stone.....	Enosburg, Va.....	May 3, 1841
Dye woods, rasping.....	Joseph Broad.....	Springfield, Mass....	Mar. 1, 1844
Dye woods, rasping, sawing, and grinding.....	John Matthews.....	Philadelphia, Pa....	Aug. 13, 1805
Dye woods, rasping, sawing, and grinding.....	John Matthews.....	Philadelphia, Pa....	Feb. 6, 1807
Dye woods, rasping, sawing, and grinding.....	Ephraim Hubbell....	Middlebury, Vt....	June 27, 1809
Fence posts.....	Henry Vail.....	Cortland, N. Y.....	Feb. 1, 1833
Fence pickets, cutting.....	J. Tichenor, S. Goodrich, & G. A. Hart..	Ithaca, N. Y.....	June 22, 1836
Fence pickets, turning.....	Elisha Briggs.....	Perry, N. Y.....	July 20, 1842
Gauge and jointer.....	John Wadsworth....	Milton, Mass.....	Feb. 10, 1810
Gimlet.....	Ezra L'Hommiedieu..	Chester, Ct.....	Mar. 10, 1838
Gimlet, forging.....	De Grass Fowler....	Wallingford, Ct....	July 2, 1836
Gimlet.....	William M. Fowler..	N. Brandford, Ct....	April 28, 1836
Gimlet, twist screw.....	Joseph Broad.....	Salisbury, Ct.....	June 25, 1813
Gouge.—See Class 2.			
Grooving machine.....	David D. Hanson....	Ware, N. H.....	June 29, 1833
Grooving and planing bit.....	John Shugert.....	Laurensville, Pa....	Nov. 19, 1833
Grooving plane.....	James Herman.....	Lancaster, Ohio....	Aug. 27, 1835
Grooving plane.....	S. Longanecker and Charles Myers.....	Lancaster, Pa.....	Feb. 7, 1829
Grooving plane.....	E. W. Carpenter.....	Lancaster, Pa.....	Jan. 30, 1830
Hoops, and barrels, dressing....	Kimball, Perry, and Spaulding.....	Peterborough, N. H.	Sept. 18, 1835
Hoops, coopers', making out of split timber.....	James McWhorter...	Brookville, Ind.....	Nov. 6, 1843
Hoops, making.....	Moses Granger.....	Utica, N. Y.....	Dec. 31, 1833
Hoops, sawing.....	Phineas Slayton....	Lockport, N. Y.....	May 1, 1828
Hoops, sawing laths and staves..	Isaac Price, jr.....	Lockport, N. Y.....	Aug. 19, 1828
Hoops, sawing, (improvement on Slayton's).....	Nicholas Bratt.....	Lockport, N. Y.....	July 31, 1828
Hoops, shaving, out of split timber	David Shriver.....	Petersburg, Va.....	May 17, 1810
Hoops, shaving.....	Gab. Heatwoal.....	Harrisburg, Va....	July 27, 1831
Hoops, splitting.....	William Rose.....	Philadelphia, Pa....	Sept. 3, 1844
Hoops, truss making.....	Tristram Burgess and Simon Burgess.....	Livonia, N. Y.....	Jan. 21, 1835
Joint, carpenter's sliding.....	Geo. B. Raymond and Shadrack Trumbull.	Suffield, Ct.....	April 23, 1816
Joint, of wood work.....	S. C. Batchelor and N. H. Thomas.....	Watertown, N. Y..	Mar. 30, 1836
Joining boards.....	Elijah B. Clarke.....	Damascus, Pa.....	Jan. 31, 1827
Joining and matching boards....	David Gleason and H. Frisbee.....	Bethany, N. Y.....	April 8, 1826
Lagging machine for cutting circles	Benjamin B. Slade....	Smithfield, R. I....	Jan. 27, 1833
Lasts, manufacturing.....	William Young.....	Philadelphia, Pa....	May 20, 1807
Lasts, right and left.....	William Young.....	Baltimore, Md.....	June 10, 1817
Lasts, shoemaker's.....	Seth Carsley, 2d....	Harrison, Me.....	April 2, 1830
Lathe.....	Elias Rhodes.....	Kingsbury, N. Y....	Nov. 11, 1830
Lathe.....	Enos & Nelson Alvord	Westfield, Mass....	Oct. 11, 1836
Lathe, chuck for.....	Simon Fairman.....	Waterford, N. Y....	July 18, 1840
Lathe, chuck, universal.....	Sidney S. Hogle.....	Rockville, N. Y....	Nov. 16, 1841
Lathe, cooper's.....	Isaac Hoover.....	Miamisburg, Ohio..	July 2, 1835
Lathe, gripe chuck for.....	David Peeler.....	Boston, Mass.....	Mar. 31, 1836
Lathe, pattern for turning lasts..	Henry Mellish.....	Walpole, N. H.....	Dec. 23, 1834
Lathe, pin for turning wire eyed buttons.....	William Lawrence....	Meriden, Ct.....	April 12, 1815
Lathe, turning.....	Amos Haggert.....	Middlesex co., Mass	June 10, 1800
Lathe, turning.....	William Ross.....	Chester county, Pa..	July 10, 1800
Lathe, turning.....	John Hunt.....	Shutesbury, Mass..	June 8, 1826
Lathe, turning.....	William Patrick.....	Leverett, Mass.....	April 24, 1827
Lathe, turning.....	Jefferson Moore.....	Leverett, Mass.....	Jan. 19, 1828
Lathe, turning.....	Elijah Rutnam.....	Gardiner, Me.....	Dec. 9, 1829

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Lathe, turning.....	Cotton White and A. Hill.....	Hadley, Mass.....	Mar. 30, 1824
Lathe, turning.....	Morris J. Gardner....	Yorkborough, Pa..	Dec. 14, 1830
Lathe, turning.....	William Green.....	Bedford co., Tenn..	April 27, 1832
Lathe, turning.....	John Bisbee.....	Plainfield, Mass....	Nov. 8, 1832
Lathe, turning.....	John Clarke, jr.....	Mill End, Glasgow, North Britain.....	July 30, 1840
Lathe, turning.....	James D. Willoughby	Gettysburg, Pa....	Mar. 15, 1845
Lathe, turning.....	Milton W. St. John..	Plainfield, N. Y....	May 13, 1845
Lathe, turning boats' oars.....	Bennet Potter and A. F. Potter.....	Hubbardstown, Mas	Jan. 20, 1844
Lathe, turning chair tops.....	Horatio Cooke.....	New York.....	Nov. 30, 1832
Lathe, turning, handles, poles....	Collins & Wistar, as- s'ees of Stacy Costill	Philadelphia, Pa....	June 7, 1841
Lathe, turning irregular forms...	Cullen Whipple, J. J. Sprague, and Milton T. Whipple.....	Douglas, Mass.....	April 3, 1835
Lathe, turning or cutting irregular forms.....	Thomas Blanchard...	Boston, Mass.....	Mar. 21, 1843
Lathe, turning irregular forms...	Edwin Tucker.....	Bucyrus, Ohio.....	Oct. 24, 1844
Lathe, turning irregular forms...	Warren Hale and Al- len Goodman.....	Dana, Mass.....	July 22, 1845
Lathe, turning mouldings & beads	Eli Coddington.....	Thompson, N. Y....	July 31, 1837
Lathe, turning rake and hoe han- dles.....	William Shepardon & J. C. Sperry.....	Hamilton and Cam- den, N. Y.....	Dec. 3, 1827
Lathe, turning rake & hoe handles	Anson Sperry.....	Rotterdam, N. Y....	Dec. 26, 1827
Lathe, turning rake handles.....	James Haven.....	Newport, N. H....	Oct. 14, 1835
Lathe, turning machine for rake teeth.....	Giles Dayton and Wm Stedman.....	Blanford and Spring- ham, Mass.....	Jan. 13, 1835
Lathe, turning rollers for rolling iron.....	Samuel Rogers.....	Bridgewater, Mass..	June 24, 1818
Lathe, turning spools.....	Jonathan H. Cary...	N. New Salem, Mas	Aug. 21, 1844
Lathe, turning wood tapering....	Wyllys Avery.....	Salisbury, N. Y....	June 5, 1844
Lathe, turning tenons for rake teeth	J. W. Sweet and W. Stedman.....	Berkshire, Mass...	Mar. 5, 1827
Lathe, turning whip stocks.....	Giles Dayton and An- drew Mallory.....	Westfield, Mass....	April 27, 1832
Lathe, wheel.....	Benjamin Hoadley...	New Haven, Ct...	Dec. 16, 1814
Lathe, wheelwright's fellow.....	John Sitton and James A. Black.....	Pendleton & Colum- bia, S. C.....	May 5, 1828
Laths and clapboards, sawing...	Eliphalet C. Gilman..	Canaan, Conn.....	Aug. 23, 1844
Laths, cutting.....	John N. Lynch.....	Dillsburg, Pa.....	Feb. 16, 1830
Laths, cutting.....	Jacob Jameson.....	Springfield, Ohio...	Aug. 24, 1831
Laths, cutting.....	Ira Carpenter.....	Cincinnati, Ohio....	May 2, 1832
Laths, cutting.....	Orange H. Dibble....	Evans, N. Y.....	Jan. 22, 1833
Laths, cutting.....	Jas. Mead and A. W. Pierson, ex'rs of Wil. Pierson, deceased...	Lebanon, Ohio.....	Dec. 31, 1833
Laths, cutting.....	Dana Hubba.....	Wheeling, Va.....	July 18, 1834
Laths, cutting.....	William W. Lesuer....	Urbana, Ohio.....	Oct. 8, 1834
Laths, cutting.....	David M. Cradis.....	Ithaca, N. Y.....	May 22, 1835
Laths, cutting.....	James M. Winslow....	Campbell's Port, O.	Oct. 3, 1846
Laths, hoops, slitting.....	Benj. K. Crandell....	Lockport, N. Y....	Aug. 25, 1828
Laths, machine.....	Siba Howard & Caleb Howard.....	Eaton & Bristol, Mas	Dec. 17, 1834
Laths, machine.....	Elihu Smith.....	Ithaca, N. Y.....	April 28, 1836
Laths, machinery for manufactur'g	A. P. Howell.....	Cincinnati, Ohio....	Oct. 9, 1827
Laths, machinery for manufactur'g	Levi Rice.....	Lockport, N. Y....	July 23, 1828
Lath, machine for cutting.....	Solomon F. Finch and James Wheeler....	Rootstown, Ohio....	Aug. 16, 1845
Lath, machine for cutting.....	Samuel Cheney.....	Cleveland, Ohio....	Sept. 27, 1845
Laths, metallic.—See Class 2.			
Laths, revolving, cutting.....	Simon Willard.....	Cincinnati, Ohio....	Mar. 16, 1833
Laths, sawing.....	Channing Madison...	Miamisburg, Ohio..	April 4, 1831

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Laths, splitting and cutting.....	Barnabas Langdon...	Troy, N. Y.....	Dec. 15, 1835
Logs, setting.....	Waterman B. Palmer.	Brookfield, N. Y.	July 24, 1844
Match splints, cutting.....	Hervey Law.....	Wilmington, N. C.	Aug. 28, 1844
Mitring and dovetailing boards..	Richard Urann.....	Boston, Mass.....	Oct. 26, 1839
Mitring and dovetailing the ends of boards, &c.....	Ari Davis.....	Princeton, Mass.....	Aug. 21, 1839
Mitre machine.....	Zaccheus Kelley.....	Easton, Md.....	April 22, 1812
Mortising.....	James Munsell.....	Painted Post, N. Y.	Aug. 12, 1846
Mortising hubs, machinery for...	Archibald Thompson.	Ridgeville, Md.....	April 25, 1843
Mortising machine.....	Simeon Glover and D. Parmelee.....	Newtown, Ct.....	June 8, 1807
Mortising machine.....	Henry Parmelee.....	Killingworth, Ct....	Feb. 15, 1810
Mortising machine.....	Nathan Mead & J. Cu- tal.....	Walpole, N. H.	Nov. 3, 1817
Mortising machine.....	Ezra Ripley.....	New York.....	Dec. 22, 1825
Mortising machine.....	Simon Le Roy.....	Mexico, N. Y.....	July 10, 1827
Mortising machine.....	Abel Greenleaf and H. Amidon.....	Mexico, N. Y.....	Dec. 28, 1827
Mortising machine.....	John J. Kellogg.....	Richmond, N. Y.....	Jan. 24, 1828
Mortising machine.....	William E. Marsh....	Westfield t'n'p, N.J.	April 18, 1828
Mortising machine.....	Abner Foster.....	Phillipstown, Mass....	April 29, 1830
Mortising machine.....	Henry Marsh.....	Morristown, N. J.....	June 13, 1831
Mortising machine.....	John Hasset Chandler	Worcester, Mass.....	Dec. 17, 1834
Mortising machine.....	Grove Bradley.....	Auburn, N. Y.....	Feb. 25, 1835
Mortising machine.....	Jonathan Page.....	Henniker, N. H.....	June 12, 1835
Mortising machine.....	Israel J. Richardson.	Palmyra, N. Y.....	July 7, 1835
Mortising machine.....	Imla Wright.....	Centre Antrim, N.H.	July 17, 1835
Mortising machine.....	Charles Gates.....	Centre Antrim, N.H.	Sept. 26, 1835
Mortising machine.....	George Page.....	Keene, N. H.....	Mar. 18, 1836
Mortising machine.....	Erastus M. Shaw.....	Wilbraham, Mass.....	Mar. 23, 1836
Mortising machine.....	J. C. Channell.....	Dunstable, N. H.....	June 16, 1836
Mortising machine.....	Lemuel E. Babcock..	Oldstead, N. H.....	June 16, 1836
Mortising machine.....	John Hawkins.....	Stockbridge, Mass.....	June 20, 1836
Mortising machine.....	David Clark.....	Brooklyn, Ct.....	Sept. 14, 1836
Mortising machine.....	John McBride.....	Richmond, Ind.....	Nov. 26, 1835
Mortising machine.....	Joseph Dennis and I. J. Richardson.....	Palmyra, N. Y.....	Nov. 19, 1833
Mortising machine.....	Henry Mellish.....	Walpole, N. H.....	Nov. 19, 1833
Mortising machine.....	James King.....	Morristown, N. J.....	Mar. 18, 1841
Mortising machine.....	Benj. H. Otis.....	Dedham, Mass.....	Feb. 20, 1846
Mortising machine.....	Charles Bennett.....	Pepperell, Mass.....	Sept. 17, 1845
Mortising machine and boring hubs	Geo. Nichols, assignee of J. J. Greenough..	Bridgeport, Conn...	June 13, 1846
Mortising and boring machine...	Marcellus Sands.....	Franklin, N. Y.....	Oct. 1, 1830
Mortising and boring stiles for doors.....	George Page.....	Keene, N. H.....	Mar. 13, 1830
Mortising chisel.....	David Hathaway.....	Troy, N. Y.....	Feb. 5, 1833
Mortising chisel.....	Charles Rhinehart....	Marietta, Lan'r co. Pa.	April 8, 1835
Mortising chisel, cutting and clear- ing.....	George Page.....	Keene, N. H.....	July 7, 1835
Mortising chisel, bearded.....	Silas Metcalf.....	Keene, N. H.....	Aug. 14, 1833
Mortising door stiles, &c.....	Asaph Whitmarsh....	Wilmington, Vt.....	Jan. 17, 1827
Mortising, lever power.....	Thomas Green.....	E. Bridgewater, Mas	July 30, 1833
Mortising posts and sharpening rails.....	Wandle Mace.....	Manlius, N. Y.....	April 12, 1826
Mortising, sawing, and boring...	Reuben Medley.....	New York.....	Mar. 11, 1837
Mortising and tenoning.....	Sylvanus Baldwin....	Bloomfield, Ky.....	July 7, 1829
Mortising and tenoning*	John McClintic.....	Montpelier, Vt.....	Mar. 17, 1810
Mortising and tenoning.....	Wm. Jackson and J. J. Speed, jr.....	Chambersburg, Pa....	Oct. 8, 1827
Mortising and tenoning.....	Luther Davis.....	Speedville, N. Y.....	Oct. 10, 1828
Mortising and tenoning.....	Elisha Mudge.....	Northampton, Mass.	April 14, 1829
		Genesee co., N. Y....	Oct. 1, 1830

* Reissued Oct. 27, 1835.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Mortising and tenoning	L. Sprague, M. Noyes T. Lund, jr., and J. Ayres	Dunstable, N. H. ...	Nov. 19, 1833
Mortising and tenoning	Erastus M. Shaw	Brooklyn, N. Y.	Oct. 20, 1834
Mortising and tenoning	Erastus M. Shaw	Brooklyn, N. Y.	April 8, 1835
Mortising and tenoning	Joseph H. Darby	Leominster, Mass. ...	June 15, 1835
Mortising and tenoning	Henry Barnes	Munson, Ohio.	April 28, 1838
Mortising and tenoning machine ..	Andrew Bailey	Jefferson, Ohio.	June 20, 1840
Mortising, tenoning, and boring machine	Barnet Richtmyre and James H. Martin ...	Conesville, N. Y. ...	July 16, 1839
Mortising and tenoning machine ..	Warren L. Peters	Frankfort, Pa.	Dec. 12, 1842
Mortising and tenoning machine ..	Thomas A. Chandler ..	Rockford, Ill.	Dec. 9, 1846
Mortising and tenoning sash, doors and blinds	Ira Gay	Dunstable, N. H. ...	May 29, 1835
Mortising timber	Jeremy W. Bliss	Sommers, Ct.	Mar. 20, 1834
Mortising timber	George Page	Keene, N. H.	Mar. 21, 1836
Mortising timber*	Thomas H. Hoskings ..	Springfield, Ohio ...	June 30, 1837
Mortising timber	Francis and Thomas Burdick	Brooklyn, N. Y.	April 7, 1838
Mortising timber	Ira McLaughlin	Sunderland, Vt.	April 7, 1838
Mortising timber	John Andrews	Sudbury, Mass.	May 30, 1838
Mortising timber	John Gridley, ass'ee of Erastus M. Shaw ...	Baltimore, Md.	Sept. 22, 1838
Mortising timber	Jerub A. Fay	Keene, N. H.	Jan. 17, 1842
Mortising in wood	George Page	Keene, N. H.	Mar. 13, 1833
Oars, machine for turning	Ezekiel Page	Barcelona, N. Y.	Dec. 26, 1845
Pails and buckets, affixing the ears and bales of	John F. Phelps	Havana, N. Y.	May 12, 1840
Pales, for fencing	Reuben Hyde	Winchester, Mass. ...	April 19, 1822
Pales, for fencing	Amos Miner	Camillus, N. Y.	April 25, 1823
Pegs, cutting	Hezekiah Thurber ...	Painted Post, N. Y. ...	May 22, 1828
Pegs, cutting and pointing	Joseph Essex	Killingly, Ct.	July 17, 1837
Pegs, making	Thomas Rowell	Hartford, Vt.	Nov. 24, 1820
Pegs, making	S. Beckwith, S. Beck- with, jr., and Eleazer Beckwith	Westmoreland, N. Y. ...	Jan. 27, 1829
Pegs or pins, pointing	James Hull	N. Bridgewater, Mass. ...	July 7, 1832
Pegs, pointing	Wm. A. Greenwood ...	Palmer, N. Y.	Feb. 19, 1831
Pegs, pointing and splitting	Thomas Rowell	Hartford, Vt.	Feb. 11, 1825
Pegs, shoe	R. H. Thompson	Rochester, N. Y.	Mar. 23, 1836
Pegs, shoe, splitting	Mark Wilder	Peterborough, N. H. ...	Aug. 15, 1835
Pegs, shoe, machine for cutting ..	S. K. Baldwin	Guilford, N. H.	July 16, 1842
Pegs, shoe, machine for making ..	Thomas A. Robertson ..	Georgetown, D. C. ...	Aug. 16, 1845
Pegs, shoe, machine for making and driving	John C. Briggs	Saratoga, N. Y.	Oct. 9, 1845
Pit sawing and slitting machine for sawing logs	James Hamilton	New York.	June 27, 1840
Plane	J. T. Jones	Philadelphia, Pa.	May 14, 1836
Plane, accelerating, for planing & grooving	John W. Newbury ..	Avon, N. Y.	Nov. 15, 1831
Plane, bench, setting the bitt	Levi Sanford	East Solon, N. Y. ...	Nov. 26, 1844
Plane, bevel wheel, for planing ...	Jona. Newhall	Washington, Me.	Jan. 25, 1831
Plane, carpenter's	R. Welford and J. H. Deats	Philadelphia, Pa.	May 14, 1821
Plane, carpenter's	Phineas Meigs	Madison, Ct.	Feb. 9, 1831
Plane, double iron	William B. Reynolds ..	St. Clairville, Ohio ...	July 7, 1832
Plane irons.—See Class 2.			
Planes, joiner's	Leonard Bliss, ass'nor to S. S. Jeffery	Truxton, N. Y.	June 16, 1846
Plane, plough	Iarnel White	Philadelphia, Pa.	Jan. 9, 1834
Plane, revolving	Daniel N. Smith	Warwick, Mass.	Dec. 28, 1826
Plane, revolving	Lemuel Hedge	Battleboro, Vt.	June 28, 1836
Plane, screw arms for	Eman'l W. Carpenter ..	Lancaster, Pa.	Feb. 6, 1838
Plane, sliding	Jonathan Sparrow ...	Portland, Me.	Dec. 26, 1827

* Additional improvement Aug. 1, 1836.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN GRANTED.
Plane stocks, cast iron.....	Hazard Knowles....	Colchester, Ct.....	Aug. 24, 1837
Plane stocks, cast iron*.....	William Foster.....	Washington, D. C....	Nov. 24, 1843
Planing, for barge and scale boards	Wm. Kimball & Sam'l Willard, jr.....	Mount Vernon, N. H.	Oct. 23, 1813
Planing blind slats.....	Arad Woodworth, 3d.	Worcester, Mass....	Aug. 26, 1846
Planing boards.....	Jos. Percival.....	Philadelphia, Pa.....	July 30, 1831
Planing boards.....	Eben Lane?.....	Cincinnati, Ohio.....	Oct. 26, 1831
Planing boards.....	Samuel Whitney....	Dunstable, N. H....	June 3, 1837
Planing boards.....	Robert Luscomb.....	Penn Yan, N. Y.....	June 12, 1838
Planing boards.....	Joseph Lombard.....	Boston, Mass.....	Oct. 13, 1838
Planing boards.....	Barnabas Langdon...	Troy, N. Y.....	Jan. 9, 1838
Planing boards, grinding & polishing marble, &c.....	Moses Lancaster....	N. Liberties, Phil...	April 5, 1832
Planing, cylindrical.....	Uri Emmons.....	New York.....	April 25, 1829
Planing, edging & grooving boards	Jacob Tees.....	Kensington, Pa.....	June 13, 1831
Planing engine, circular.....	Uri Emmons.....	New York.....	Sept. 10, 1829
Planing and grooving.....	Caleb Taylor.....	Angola, N. Y.....	Feb. 7, 1829
Planing, grooving, cutting boards, and dressing brick}.....	William Woodworth.	Hudson, N. Y.....	Dec. 27, 1828
Planing and joining.....	Joseph S. Mott.....	Albany, Vt.....	Mar. 8, 1806
Planing and joining, tonguing and grooving†.....	James McGregor, jr..	Wilton, N. Y.....	Aug. 28, 1833
Planing machine.....	John Bennock.....	Boston, Mass.....	June 1, 1805
Planing machine.....	Joseph Hawkins.....	Philadelphia, Pa.....	Feb. 19, 1806
Planing machine.....	Christian Ritter.....	Beaver, Pa.....	Aug. 11, 1809
Planing machine.....	Joseph Coppinger....	Baltimore, Md.....	Oct. 31, 1809
Planing machine.....	James Baldwin.....	Westfield, Mass....	Mar. 7, 1818
Planing machine.....	Herman Allen.....	Randolph co., N. C.	Dec. 22, 1826
Planing machine.....	Josiah Reihm.....	Savage Factory, Md	Nov. 1, 1827
Planing machine.....	Thomas F. Fuller.....	Bristol Pa.....	Oct. 25, 1832
Planing machine.....	Benjamin Kugler....	Philadelphia, Pa.....	June 3, 1833
Planing machine.....	Thomas E. Daniels....	Worcester, Mass....	Dec. 23, 1834
Planing machine.....	Fisher Stedman.....	Aquacanock, N. J....	Aug. 17, 1835
Planing machine.....	Reid R. Throckmorton	New York.....	Oct. 6, 1835
Planing machine.....	Reid R. Throckmorton	New York.....	Oct. 22, 1835
Planing machine.....	McLauchlin & Hill...	Sunderland, Vt.....	Oct. 28, 1835
Planing machine.....	Melzer Tuells.....	Milo, N. Y.....	Feb. 10, 1836
Planing machine.....	Lorrain Curtis.....	Sherburne, N. Y....	June 16, 1836
Planing machine.....	P. M. Mariz.....	Marion co., Ia.....	June 25, 1836
Planing machine.....	Ira Gray.....	Dunstable, N. H....	June 25, 1836
Planing machine.....	William Woodworth.	New York.....	Nov. 15, 1836
Planing machine.....	Alonzo G. Hull.....	Brooklyn, N. Y....	Sept. 30, 1837
Planing machine, (improvement on Woodworth's).....	Artemas L. Brooks...	Lowell, Mass.....	Jan. 7, 1835
Planing machine.....	Freeman Walcott and Jas. H. Hutchinson, (Hutchinson, ass'nee of Walcott).....	Boston, Mass.....	July 16, 1839
Planing machine.....	Hervey Law.....	Wilmington, N. C.	Sept. 30, 1841
Planing machine.....	Reid R. Throckmorton	Brooklyn, N. Y....	May 1, 1845
Planing machine.....	Benjamin Brown.....	Burlington, Vt.....	Oct. 9, 1845
Planing machine.....	Joseph E. Andrews...	Boston, Mass.....	Nov. 21, 1845
Planing machine, fastening cutters	Benjamin Bucknell...	Cincinnati, Ohio.....	Mar. 21, 1845
Planing machine for shingles....	Joseph S. L. Hunt...	Boston, Mass.....	Oct. 9, 1845
Planing and matching.....	Zadock B. Grover and D. Lawton.....	Springwater, N. Y.	Dec. 23, 1834
Planing moulding, & smooth planing||.....	Charles Thompson...	Poughkeepsie, N. Y.	Dec. 6, 1830
Planing mouldings on wood.....	Ambrose Church, jr..	Canandaigua, N. Y.	July 29, 1837
Planing, sawing, and feeding machine.....	Thomas J. Wells....	New York, N. Y....	April 11, 1846
Planing and sawing bellows boards	John Hinman.....	New Haven, Ct.....	June 1, 1805

* Additional improvement, March 16, 1844.

† Extended 7 years, from Dec. 27, '42, and 7 years, from Dec. 27, '49; reissued July 8, '45; disclaimer March 1, '38, June 8, '40, Jan. 6, '43, Jan. 13, '43, and July 27, 1844.

‡ Add'l imp., Jan. 9, 1838; disclaimer May 10, 1839; reissued July 16, 1843.

|| Reissued Dec. 6, 1832, and Jan. 30, 1834.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Planing and shaving.....	William Badger.....	Madison co., Miss..	Mar. 2, 1813
Planing, tonguing, and grooving..	John Drummond.....	Whitestown, N. Y..	April 27, 1832
Planing, tonguing, and grooving..	John D. Beers.....	Philadelphia, Pa....	Jan. 18, 1834
Planing window sash.....	Ira Gay.....	Dunstable, N. H....	May 29, 1835
Planing wood, horizontal knife...	Uri Emmons.....	New York.....	Mar. 6, 1832
Plough beams, carriage shafts, and cross bars, machine for hewing.	D. Ruggles, Nourse, and Mason, ass'nees of E. G. Matthews..	Worcester, Mass...	Oct. 22, 1840
Ploughs, manufacture of.....	D. Ruggles, Nourse, and Mason, ass'nees of E. G. Matthews..	Worcester, Mass...	Feb. 23, 1841
Reeding and fluting, straight and spiral.....	John January.....	Greenville, Ky.....	Mar. 3, 1829
Rules, carpenters' joints.....	Lemuel Hedge.....	Brattleborough, Vt..	April 22, 1835
Sample box.....	George P. Oakley.....	Poughkeepsie, N. Y..	Nov. 25, 1818
Sash machine.....	Almon Downs.....	St. Clair, Mich.....	Nov. 8, 1845
Saw, annular.....	Robert Grant.....	Baltimore, Md.....	Oct. 8, 1838
Saw belt.....	William Cary.....	Poughkeepsie, N. Y..	Feb. 17, 1836
Saw belt and band.....	Adam Stewart.....	Baltimore, Md.....	July 5, 1817
Saw belt, for timber.....	Benjamin Barker.....	Ellsworth, Me.....	Jan. 6, 1836
Saw, chain, for wood, metal, and stone.....	Phineas P. Quimby..	Belfast, Me.....	June 3, 1834
Saw, circular.....	Zachariah Cox.....	Georgia.....	Mar. 14, 1795
Saw, circular.....	William F. Hill.....	New York.....	July 11, 1818
Saw, circular.....	John Brown.....	Boston, Mass.....	Aug. 13, 1823
Saw, circular.....	Sylvanus Bonnell....	Chatham, N. J.....	Sept. 26, 1823
Saw, circular.....	William Kendall, jr..	Kennebec, Me.....	May 18, 1826
Saw, circular.....	Levi Hitchcock.....	Springfield, Mass...	June 29, 1833
Saw, circular, for cutting laths...	Francis Shumard.....	Cincinnati, Ohio....	Oct. 31, 1832
Saw, circular.....	Jonathan Gove.....	Fayetteville, N. C..	Oct. 16, 1839
Saw, circular, preparing blocks for matches.....	Jonathan Morgan...	Portland, Me.....	June 27, 1839
Saw, circular, relieving the collar of a.....	Manassah Andrews & James Sproat.....	Taunton, Mass.....	Dec. 31, 1839
Saw, circular, for cutting off piles under water*.....	Erastus E. Cole.....	Boston, Mass.....	Sept. 14, 1844
Saw, circular, sawing lumber, manner of applying.....	John K. Mayo.....	Orrington, Me.....	Mar. 20, 1844
Saw, circular, reacting.....	William Avery.....	Cazenovia, N. Y.....	Dec. 8, 1826
Saw, circular, revolving.....	Tyler Howe.....	Spencer, Mass.....	Feb. 19, 1829
Saw, cross-cut.....	Thomas Cahoon.....	Cazenovia, N. Y.....	April 11, 1808
Saw, cross-cut, circular.....	Aaron H. Foote.....	New London, N. Y..	July 14, 1830
Saw, cutting timber.....	John Ruthven.....	New York.....	Nov. 30, 1835
Saw, cylindrical.....	Lewis B. Bump.....	Wareham, Mass.....	Aug. 29, 1828
Saw, double toothed.....	Stafford Dawley.....	Annesville, N. Y.....	Jan. 14, 1831
Saw, for felling trees.....	James Hamilton.....	New York.....	June 26, 1835
Saw, for felling trees.....	Walter Hunt.....	New York city.....	Jan. 6, 1836
Saw frame, armed.....	Nathaniel Sperry.....	Nashville, Tenn.....	June 18, 1828
Saw gate, give motion to.....	Samuel Herrick.....	Clermont co., Ohio..	July 21, 1817
Saw, hand.....	Isaiah Jennings.....	New York.....	April 17, 1809
Saw, hanging and straining.....	Lewis Chapin.....	Walpole, N. H.....	Oct. 13, 1829
Saw, horizontal and vertical.....	Adam Stewart.....	Baltimore, Md.....	July 5, 1817
Saw-guides, mill.....	Jonathan Norcross...	Eatonton, Pa.....	Aug. 4, 1843
Saw, machine for filing.....	Calvin B. Rogers.....	Saybrook, Conn.....	Dec. 7, 1844
Saw mills.....	Henry Dulheur.....	South Carolina.....	Aug. 18, 1797
Saw mills.....	Aaron Clarke.....	New York.....	Mar. 30, 1798
Saw mills.....	Thomas Payne.....	New York.....	Dec. 2, 1799
Saw mills.....	Moses Coates.....	Pennsylvania.....	April 1, 1802
Saw mills.....	Hezekiah Richardson and Levi Richardson	Massachusetts.....	April 28, 1802
Saw mills.....	Jos. Quimby.....	Boston, Mass.....	April 25, 1806
Saw mills.....	Jacob Spafford.....	Ipswich, Mass.....	June 23, 1807
Saw mills.....	Ezra Old and Pliny Upham.....	Worcester, Mass...	Dec. 24, 1809

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Saw mills	Abel Wright.....	Canaan, N. Y.....	Mar. 7, 1819
Saw mills	Adonijah Jones, jr...	Bethlehem, Mass...	Mar. 14, 1819
Saw mills	Miles H. Abbott.....	.....	Feb. 26, 1811
Saw mills	Oliver Evans.....	Philadelphia, Pa.....	April 15, 1811
Saw mills	Marshall Lewis.....	Chenango, N. Y.....	May 24, 1811
Saw mills	Webb Hart.....	Cheshire, Conn.....	May 26, 1812
Saw mills	Hiram Whitcomb....	Cornwall, Conn.....	Mar. 2, 1813
Saw mills	Luther Bissell.....	Hartwick, N. Y.....	July 3, 1813
Saw mills	Elisha Morgan.....	Clinton county, N.Y.	Jan. 24, 1815
Saw mills	Henry Quinn.....	Huntington, N. J....	Feb. 21, 1815
Saw mills	Thomas Cahoon.....	Washington, D. C....	Jan. 5, 1816
Saw mills	David and M. Fountain	Eastern Shore, Md...	April 5, 1817
Saw mills	Daniel Collins.....	Genesee co., N. Y....	Jan. 6, 1818
Saw mills	John Bruff.....	Somerset co., Md....	Aug. 16, 1821
Saw mills	Thomas White.....	Chester, S. C.....	April 27, 1822
Saw mills	Isaac Ryon.....	Bridgewater, Mass...	Nov. 24, 1825
Saw mills	Ebenezer Whitney...	Ithaca, N. Y.....	Nov. 1, 1825
Saw mills	Israel Johnson, jr...	Villenovia, N. Y....	Feb. 8, 1826
Saw mills	Anthony Bencine....	Milton, N. C.....	June 4, 1827
Saw mills	Benjamin Overman...	Greensborough, N.C.	Dec. 11, 1827
Saw mills	Isaiah Call.....	Woodstock, Vt.....	April 28, 1828
Saw mills	George Brown.....	Deerfield, N. Y.....	April 7, 1829
Saw mills	Israel Johnson, jr...	Moriah, N. Y.....	May 7, 1829
Saw mills	Eli Mobley.....	Fredericktown, Md...	June 5, 1830
Saw mills	Jacamah Smith.....	Morris, N. J.....	Jan. 27, 1831
Saw mills	Rufus Eaton.....	Concord, N. H.....	Nov. 24, 1831
Saw mills	Vachael Blaylock....	Bellefontaine, Ohio..	Mar. 24, 1832
Saw mills	John R. Drake.....	Owego, N. Y.....	April 27, 1832
Saw mills	Levi Chapin.....	Walpole, N. H.....	June 1, 1832
Saw mills	David W. Hall.....	Sparta, Ga.....	Nov. 27, 1832
Saw mills	Henry Gordon.....	Liberty t'nship, Pa.	Feb. 28, 1833
Saw mills	Nathan Kirk.....	Clinton county, Ind.	Nov. 19, 1833
Saw mills	Asa Ransom.....	Clarence, N. Y.....	June 26, 1834
Saw mills	Ernst G. Augustin...	New York.....	July 17, 1835
Saw mills	Lynus Yale.....	Utica, N. Y.....	Sept. 11, 1835
Saw mills	Uri Emmons.....	New York.....	Oct. 6, 1835
Saw mills	G. W. Black.....	Montgomery co., Te.	Feb. 3, 1836
Saw mills	David Washington...	Peru, Mass.....	Feb. 25, 1836
Saw mills	Isaac Read.....	Marshfield, Mass...	Mar. 2, 1836
Saw mills	Daniel Gerrish.....	Boston, Mass.....	April 11, 1836
Saw mills	James Sanders.....	Alleghany co., Md...	April 28, 1836
Saw mills	W. J. McGhee.....	Columbus, Ga.....	May 14, 1836
Saw mills	T. B. Naylor.....	Jonesville, N. C....	June 2, 1836
Saw mills	Simon Willard.....	New York city.....	June 30, 1836
Saw mills	Samuel Goudy.....	Greensburg, Ky.....	July 2, 1836
Saw mills	John Ambler.....	Philadelphia, Pa....	Dec. 1, 1837
Saw mills	Cornelius Van Alstine	Manlius Centre, NY..	Aug. 18, 1838
Saw mills	James Secor.....	New York.....	April 28, 1838
Saw mills	Eden Baldwin.....	Ashfield, Mass.....	Jan. 31, 1839
Saw mills	David Philips.....	Georgetown, Pa.....	Mar. 12, 1841
Saw mills	{ James B. Lowry.....	{ North East, Pa.....	{ June 11, 1841
Saw mills	{ Phillander Eggleston..	{ Mayville, N. Y.....	{ June 11, 1841
Saw mills	William Bryant.....	Nashville, Tenn.....	June 11, 1841
Saw mills	Lemuel Hedge and Ed- win F. Johnson.....	New York, N. Y.....	June 18, 1842
Saw mills	John E. Kenderline..	Lamberton, Pa.....	Mar. 10, 1843
Saw mills	R. S. Morrison and B. B. Cushing.....	Frankfort, Maine...	Mar. 7, 1846
Saw mills	Horace Merrill.....	Wheatland, N. Y....	Sept. 3, 1846
Saw mill, by animal power.....	Ethan Owen.....	P. George's co., Va.	Aug. 1, 1812
Saw mills, apparatus for setting head and tail ends of logs in...	George Sweney.....	Bucyrus, Ohio.....	Mar. 7, 1846
Saw mill, arranging the saw gate and fender posts of.....	Samuel Darling, 2d..	Groton, Vt.....	May 7, 1842

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Saw mill, blocks for.....	Erastus Rathburn....	Conneaut, Ohio.....	April 11, 1836
Saw mill, block head for.....	John Sinclair.....	Richland, Ohio.....	Feb. 28, 1833
Saw mill, carriage.....	Henry Gordon.....	Adams county, Pa....	April 8, 1835
Saw mill, carriage.....	Samuel Phelps.....	Mount Morris, N.Y....	Sept. 18, 1835
Saw mill, carriages.....	James Dane.....	West Derby, Vt.....	April 22, 1845
Saw mill, carriage, head block for	Jos. Briggs.....	Schoharie, N. Y.....	July 9, 1814
Saw mill, carriage, propelling.....	Jos. Mitchener.....	Chester t'nship, Ohio	Sept. 16, 1833
Saw mill carriage, self-setting ap- paratus for setting logs on.....	Benjamin Webb.....	Warren, N. Y.....	May 6, 1844
Saw mill carriage, setting logs on.....	John B. Squeir.....	Liberty t'nship, Ohio	Oct. 9, 1844
Saw mill carriage, steadying the logs thereon.....	Henry Stanton.....	Richland, N. Y.....	July 16, 1844
Saw mill, circular.....	George Huling.....	Shaftsbury, Vt.....	Nov. 24, 1809
Saw mill, circular.....	Thomas Blanchard....	New York.....	Aug. 8, 1834
Saw mill, circular.....	John Penman.....	Charlotte, N. C.....	Sept. 9, 1834
Saw mill, circular, railway, and propelling machinery.....	Allen B. Reynolds....	Cincinnati, Ohio....	June 29, 1832
Saw mill, circular, wedge for.....	Silas Underwood.....	Hartwick, Vt.....	July 22, 1831
Saw mill, constructing.....	Nath. and P. Crosby..	Pomfret, N. Y.....	Mar. 27, 1835
Saw mill, crank.....	Benjamin F. Snyder....	Elmira, N. Y.....	Sept. 29, 1836
Saw mill, cross-cutting.....	Rufus Riker.....	Dexter, Maine.....	Feb. 20, 1836
Saw mill, curvilinear.....	David Baker.....	Ipswich, Mass.....	Aug. 7, 1828
Saw mill, descending.....	Stephen Belknap and Samuel Merrill.....	Georgetown, D. C....	Feb. 15, 1811
Saw mill, dogs.....	Martin Rich.....	Candor, N. Y.....	Feb. 19, 1830
Saw mill, dogs.....	Anson Andrews.....	Spencer, N. Y.....	April 10, 1830
Saw mill, dogs.....	Joshua Pierce, Joshua Whitley, and Aaron S. Whitley.....	Candor, N. Y.....	April 13, 1830
Saw mill, dogs.....	Martin Rich.....	Candor, N. Y.....	April 13, 1830
Saw mill, dogs.....	Anson Andrews.....	Spencer, N. Y.....	April 26, 1831
Saw mill, dogs.....	Martin Rich.....	Ithaca, N. Y.....	Feb. 8, 1833
Saw mill, dogs.....	Martin Rich.....	Ithaca, N. Y.....	Mar. 6, 1834
Saw mill, dogs.....	Phineas Bennett.....	Hector, N. Y.....	Dec. 2, 1834
Saw mill, dogs.....	H. Thurber.....	Painted Post, N. Y..	May 30, 1838
Saw mill, dogs.....	Martin Rich.....	Ithaca, N. Y.....	Aug. 28, 1840
Saw mill, dogs.....	Damon A. Church.....	Friendship, N. Y....	April 16, 1841
Saw mill, dogs.....	Linus Yale.....	New Port, N. Y.....	July 29, 1841
Saw mill, dog gauge.....	Martin Rich.....	Caroline, N. Y.....	Mar. 27, 1835
Saw mill, dog block.....	Benjamin F. Snyder....	Painted Post, N. Y..	April 3, 1835
Saw mill, dog lever.....	Martin Rich.....	Caroline, N. Y.....	Mar. 25, 1835
Saw mill dog, self-setting.....	George Henning.....	Ithaca, N. Y.....	April 1, 1842
Saw mill, for dye woods.....	John Elder.....	Hamilton, Mass.....	Feb. 16, 1816
Saw mill, for dye woods.....	John Elder.....	Hamilton, Mass.....	April 11, 1816
Saw mill, elevating.....	Samuel Brewster.....	Middlesex, N. J.....	Oct. 30, 1815
Saw mill, endless side chain, car- riages for.....	James Murray.....	Baltimore, Md.....	Oct. 11, 1836
Saw mill feeder.....	Nathan Compton.....	New Garden Ia.....	Oct. 21, 1846
Saw mill, floating.....	James C. Ely.....	New York.....	Oct. 21, 1829
Saw mill gates, for curvilinear saw- ing.....	James Hamilton.....	New York.....	July 2, 1842
Saw mill, gauge.....	William A. Needham....	Brimfield, Mass.....	Sept. 9, 1835
Saw mill, gauge setter.....	Anson Blake.....	Lincoln, Ky.....	Nov. 27, 1807
Saw mill, and grist.....	Jos. Ennalls.....	New Market, Md.....	April 10, 1810
Saw mill, and grist.....	John D. De Lacy.....	New York.....	Mar. 28, 1812
Saw mill, and grist.....	William Prim.....	Lebanon, Pa.....	Oct. 6, 1830
Saw mill, head block of.....	James King.....	Sapling Grove, Va....	Feb. 20, 1841
Saw mill, head and tail block s of	Thomas C. Theaker....	Bucyrus, Ohio.....	Jan. 30, 1844
Saw mill, horse.....	Sol. R. Johnson.....	New York.....	Oct. 25, 1826
Saw mill, horse, hand.....	George Harris.....	Philadelphia, Pa....	May 3, 1810
Saw mill, (improvement on John- sons).....	Anson B. Graham.....	Lee, Mass.....	Sept. 28, 1827
Saw mill, locomotive, steam.....	William G. Berry and J. T. Osborn.....	Cincinnati, Ohio....	Nov. 26, 1826

* Reissued February 25, 1836.

† Reissued February 25, 1836.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Saw mill, machinery.....	Jos. Newton.....	Sweden, N. Y.....	Oct. 1, 1830
Saw mill, machinery and wheels.	John Muir.....	Menallen, Pa.....	Sept. 26, 1835
Saw mill, portable.....	David Russell.....	Tusculum, Ala.....	Oct. 27, 1835
Saw mill, portable.....	Pearson Crosby.....	Fredonia, N. Y.....	June 7, 1838
Saw mill, portable.....	James C. Mayo.....	Columbia, Va.....	July 29, 1841
Saw mill, portable.....	Pearson Crosby.....	Fredonia, N. Y.....	Oct. 7, 1842
Saw mill, portable circular.....	George Page.....	Baltimore, Md.....	July 16, 1841
Saw mill, propelling.....	Stephen R. Morrison.....	Kingua, Pa.....	Feb. 11, 1834
Saw mill, reciprocating.....	William Kendall, jr.....	Waterville, Maine.....	Nov. 23, 1827
Saw mill, reciprocating.....	William Kendall.....	Waterville, Maine.....	Dec. 31, 1827
Saw mill, resawing boards.....	Pearson Crosby.....	Fredonia, N. Y.....	Nov. 3, 1841
Saw mill, save all.....	Josiah Hart and Lester Fling.....	Cheshire, N. H.....	Jan. 18, 1812
Saw mill, saw.....	Levi Fisk.....	Schroon, N. Y.....	Aug. 17, 1835
Saw mill, saw.....	B. K. Barker.....	Johnsbury, N. Y.....	Feb. 5, 1836
Saw mill, sawing felloes and other round stuff.....	Isaac Sheetz.....	Taneytown, Md.....	May 20, 1842
Saw mill saw, mode of straining..	R. Cook and S. E. Burnham.....	Saratoga Spr'gs, N.Y.....	Feb. 1, 1842
Saw mill, self-acting head and tail blocks of.....	Josiah J. Parker.....	Plymouth, Ohio.....	June 13, 1844
Saw mill, self-adjusting log brace*	Benjamin Cushwa.....	Clearspring, Md.....	July 15, 1840
Saw mill, self-setting.....	Thos. McCarty.....	Elmira, N. Y.....	April 8, 1833
Saw mill, self-setting.....	Frederick Goodell and Thomas W. Harvey.....	New York.....	Nov. 3, 1841
Saw mill, self-setting head and tail block for.....	Levi Heald.....	Bartlett, Ohio.....	June 3, 1843
Saw mills, self-setting.....	Benjamin Webb.....	Warren, N. Y.....	April 1, 1845
Saw mills, self-setting.....	Henry Quinn.....	New Alexandria, N.J.....	June 25, 1845
Saw mill, self-tending.....	Edwin Moody and Samuel Morrill.....	Andover, N. H.....	Feb. 8, 1840
Saw mill, setting the foot block of	D. V. Thomas.....	Richfield, N. Y.....	Sept. 17, 1842
Saw mill, setting logs on the carriage of.....	F. M. Stetson and John Eaton.....	Sangerfield & Brookfield, N. Y.....	July 15, 1844
Saw mill, setting saw logs, and opening and shutting gates of..	Nathaniel P. Stearns.....	Linklaen, N. Y.....	Oct. 30, 1844
Saw mill, steam.....	Robert McKean.....	New Jersey.....	Mar. 24, 1798
Saw mill, strap.....	Othniel Stone.....	Pittsford, R. I.....	Oct. 6, 1834
Saw mill, sustaining logs in.....	Jeremiah Rohrer.....	Rohrer'sville, Md.....	May 29, 1841
Saw mill, tail blocks of.....	John Miller.....	Williamsport, Ohio.....	Jan. 20, 1845
Saw mill, tail blocks of, for setting the log.....	Charles D. Wright.....	Colchester, Ct.....	Sept. 30, 1842
Saw mill, timber, sawing with a director compound bevel.....	James Hamilton.....	New York, N. Y.....	Nov. 21, 1843
Saw mill, travelling, cross-cut....	Samuel K. Gore.....	Bradford co., Va.....	May 4, 1812
Saw mill, wind.....	Jesse Springer.....	Cape May, N. J.....	Dec. 27, 1815
Saw mill, without saw gate.....	John C. Yates.....	Columbus, Tenn.....	April 21, 1838
Saw, rotary.....	Robert S. Thomas.....	Rockingham, N. C.....	July 1, 1836
Saw, rotary, compound.....	Adam Stewart.....	Boston, Mass.....	Sept. 29, 1825
Saw, rotary, for cutting round tenons.....	Charles Whitaitt.....	Connersville, Ind.....	Sept. 25, 1839
Saw, of saw mill without a gate, straining.....	Calvin Stigleman and A. Seely.....	Alton, Ill.....	Dec. 16, 1844
Saw, strainer.....	Tunis V. Le Roy and Abel Sanford.....	Newport, N. Y.....	July 25, 1832
Saw, straightening.....	E. Rathburn and W. Tinker.....	Conneaut, Ohio.....	July 1, 1836
Saw trimmer.....	John R. Failing and Robert G. Nellis.....	Canajoharie, N. Y.....	April 27, 1831
Saw trimmer.....	Adam Clark, jr.....	Bern, N. Y.....	Aug. 24, 1831
Saw, two edged.....	Moses Cass and Aaron Bull.....	Caroline, N. Y.....	Aug. 31, 1827
Saw, use of.....	Aaron Field.....	Jerico, Vt.....	Mar. 6, 1835
Saw, vertical, for fret work.....	E. and C. Boothe.....	Southbury, Ct.....	April 22, 1826

* Additional improvement, June 29, 1841.

† Additional improvement, Oct. 26, 1842.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Saw, whip, application of the....	Sam'l Barbour and N. U. Tompkins.....	New York.....	June 1, 1808
Saw, whip, driving.....	Joseph Coppinger....	Frederick, Ga.....	May 19, 1810
Saw, wood.....	James Hamilton.....	Brookfield, Mass....	July 31, 1809
Saw, wood.....	James Hamilton.....	New York.....	June 10, 1830
Sawing, cuvilinear bevel, machinery for.....	James Hamilton.....	New York, N. Y....	April 15, 1843
Sawing boards.....	Oliver Judd, jr.....	London, Mass.....	May 1, 1810
Sawing boards.....	William Kendall.....	Waterville, Me.....	Jan. 16, 1826
Sawing boards.....	David Flagg, jr.....	Gardiner, Me.....	Jan. 19, 1830
Sawing boards.....	Ruel Jacobs.....	Wilton, N. Y.....	Feb. 23, 1831
Sawing and boring.....	Benj. F. Goodspeed & D. H. Wiswell.....	New York.....	April 16, 1834
Sawing circles.....	Thomas Armstrong..	Anderson town'p, O	July 18, 1832
Sawing circular timber.....	James Linsey.....	Cazenovia, N. Y....	Feb. 4, 1809
Sawing circular timber.....	Benjamin Overman....	Greensbury, N. C....	Sept. 15, 1826
Sawing boards in oars of rowing boats.....	John Benson, Ezekiel Page, Rich'd Hough	Boston, Mass., West Leyden, N. Y....	May 26, 1842
Sawing boards, setting logs for...	John Sheffield.....	Williamson, N. Y....	April 26, 1842
Sawing furrow boards.....	Nathan H. Dearborn..	Conway, N. H.....	Dec. 28, 1831
Sawing irregular forms.....	Frederick W. Harris..	Lancaster, Mass....	Sept. 27, 1845
Sawing logs in plank.....	Peter Tomlinson.....	Derby, Ct.....	April 3, 1829
Sawing machine.....	E. Old and P. Upham	Brookfield, Mass....	Dec. 26, 1810
Sawing machine.....	Russell Canfield.....	Philadelphia, Pa....	May 1, 1812
Sawing machine.....	John H. Morrison....	Boscawen, N. H....	Mar. 18, 1814
Sawing machine.....	Joseph Peavy.....	Levant, Me.....	May 14, 1836
Sawing machine, cross-cut.....	James W. Messenger..	Windham, Ohio.....	Dec. 21, 1831
Sawing machine, cross cutting.....	Henry Burger.....	Danville, Ind.....	Mar. 18, 1841
Sawing, mortising, turning, boring and grooving.....	Benj. Overman.....	Greenborough, N.C.	May 27, 1830
Sawing off logs, machine for.....	{ Isaac D. Russell, Stephen Waterman, Thomas Bloomer....	New York city... } Greenwich, Ct... }	May 19, 1843
Sawing and planing.....	Elijah Pratt.....	New York.....	Nov. 3, 1830
Sawing and planing, saw and plane combined.....		N. Granville, N. Y.	July 20, 1843
Sawing round bodies, for coopers ware.....	Samuel Newton.....	Hamilton co., Ohio..	Dec. 29, 1833
Sawing and splitting timber.....	John P. McDowell....	Summit, Pa.....	Aug. 12, 1840
Sawing stuff circular.....	Thos. Kenderdine, jr.	Horsam, Pa.....	Aug. 12, 1840
Sawing timber.....	Daniel Crane.....	Clarksburg, Va....	April 15, 1813
Sawing timber.....	David Stem.....	Vanderbury co, Ind	Dec. 14, 1830
Sawing timber.....	Joshua Webb.....	Brooklyn, Ct.....	May 14, 1836
Sawing timber, concave, convex*.	Aaron Bard and Simeon Heywood.....	Lunenburg, Mass...	July 8, 1834
Sawing timber, without a stub short	Elisha Cook.....	Bethlehem, Mass...	Jan. 20, 1810
Sawing timber, without a stub short	John Sweet.....	Bethlehem, Mass...	Feb. 5, 1810
Sawing timber, without a stub short	Wm. Underwood.....	Herkimer, N. Y....	Sept. 6, 1810
Sawing timber by steam.....	Reuben Nicholls.....	New Orleans, La....	July 21, 1826
Sawing trees.....	David Pierce.....	Poughkeepsie, N. Y.	April 23, 1829
Sawing trees.....	Samuel H. Hamilton..	New York.....	Dec. 7, 1837
Sawing various articles of carpenters' work.....	David Parmelee.....	Reading, Ct.....	Oct. 25, 1810
Sawing wood.....	Joseph Pinneo, jr....	Hanover, N. H.....	April 1, 1836
Sawing wood and bark.....	Thomas Farrington..	Boston, Mass.....	May 9, 1792
Sawing wood in a circular manner	Roger Smith.....	Norwich, Ct.....	April 24, 1810
Sawing wood for fuel, blocks for shingles, &c.....	Harlow Mitchell.....	Rutland, N. Y.....	June 14, 1834
Sawing wood by hand, horse, or water power.	Jacob Blood and Sam. A. Hurd.....	Fairfield co., Ct....	May 22, 1832
Sawing wood and stone.....	Eb. Jones.....	Alfred, Mass.....	June 28, 1808
Scaffolds, raising and supporting.	Hy. N. Nichols.....	Middlebury, Vt.....	April 24, 1824
Scale boards, cutting.....	Jonathan Carrington.	Litchfield, Ct.....	April 27, 1812
Screws, cutting, wooden.....	R. Hanceck, sen., & Edward W. Carr.....	Philadelphia, Pa....	Mar. 1, 1811

* Reissued Feb. 20, 1836.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Screws, cutting, wooden.....	James Lynch.....	Pulaaki, Tenn.....	Dec. 12, 1836
Screws, cutting, wooden.....	Stephen Treadwell...	Weston, Ct.....	May 22, 1836
Screws, cutting, wooden.....	Joseph Peavy.....	Levant, Me.....	Jan. 6, 1836
Screws, cutting in wood.....	Samuel H. Wills....	Abingdon, Va.....	June 18, 1836
Scythe handles and other articles, machine for making.....	James Embree.....	Marshallton, Pa....	Aug. 7, 1844
Sythe snath, bending, moulds for	Silas Lamson.....	Sterling, Mass.....	Nov. 25, 1834
Seasoning wood, kiln for.....	James Ronaldson....	Philadelphia, Pa....	Feb. 2, 1818
Setting logs on block-head.....	Henry Mellish.....	Drewsville, N. H....	Sept. 19, 1840
Shave, double operating.....	George B. Tally.....	Westbrook, N. C....	April 16, 1845
Shave, for getting out wooden hoops.....	Charles Stratton....	Brattleborough, Vt.	Aug. 6, 1849
Shaving woods for various pur- poses.....	Benjamin Hoadly....	Waterbury, Ct.....	June 14, 1814
Shaving and smoothing wood....	Abm. Brownson....	Lockport, N. Y....	June 21, 1826
Shingles, blinds, slats, &c., sawing	Isaac Drake.....	Minot, Me.....	May 24, 1834
Shingles and clapboards, sawing	Josiah Jaquith.....	Sherburne, Mass....	June 26, 1817
Shingles and clapboard, sawing..	Thos. J. Flanders....	Bradford, N. Y....	Sept. 25, 1836
Shingle cutter.....	George W. Dana....	Fredonia, N. Y....	Sept. 20, 1827
Shingles, cutting.....	Joel N. Johnson....	Lowville, N. Y....	Dec. 8, 1829
Shingles, cutting.....	George Wolf.....	Clear Creek tp. O....	Nov. 29, 1844
Shingles, cutting.....	Ludram M. Parsons..	Castleton, Vt.....	Mar. 12, 1839
Shingles, cutting.....	Justus Hinman, John Thatcher, and Alon- zo Palmer.....	Persia, N. Y.....	Mar. 25, 1839
Shingles, cutting.....	Miles R. Payne.....	Andersontown, Ind.	Oct. 30, 1840
Shingles, cutting*.....	Truman Wolcott....	Stow, Mass.....	Jan. 20, 1841
Shingles, cutting.....	Lloyd White.....	Jefferson, Ind.....	Nov. 10, 1841
Shingles, cutting.....	Avery Kinney.....	Homer, N. Y.....	Feb. 12, 1842
Shingles, cutting.....	Hiram H. Herrick....	Boston, Mass.....	Mar. 9, 1842
Shingles, cutting.....	Daniel M. Cummings.	East Lebanon, N. H.	May 7, 1842
Shingles, cutting.....	Alexander H. Hart..	Chagrin Falls, O....	Sept. 17, 1842
Shingles, cutting.....	Sylvester Munson....	Dillon, Ill.....	Oct. 7, 1842
Shingles, cutting.....	William Foster.....	Detroit, Michigan..	Nov. 21, 1842
Shingles, cutting.....	Jason C. Gillett.....	Bloomfield, Mich....	Dec. 20, 1843
Shingles, cutting.....	William Wood.....	Westport, Ot.....	Mar. 20, 1844
Shingles, cutting.....	Jonathan P. Bartley..	Flanders, N. Y.....	May 25, 1844
Shingles, cutting.....	Tillot Cole.....	Kent, N. Y.....	Mar. 22, 1832
Shingles, cutting from steamed timber.....	Joseph S. Raymond..	Lodi, N. Y.....	Aug. 15, 1837
Shingles, cutting from steamed, boiled, or other timber.	Daniel C. McMillen, John B. Knoll, Tho- mas S. Henry and Matthew Knoll.	Persia, Collins, and Tully, N. Y.....	Sept. 10, 1839
Shingles, dressing.....	Robert & T. Nicholson	Bairdstown, Ky.....	Dec. 13, 1806
Shingles, dressing.....	John Heaven.....	Montgomery co., Va.	Mar. 16, 1812
Shingles, dressing.....	N. P. Hawk and J. Keyes.....	Union, N. Y.....	April 21, 1836
Shingles, dressing and smoothing	George L. Day.....	Union, N. Y.....	July 29, 1837
Shingles, gauges of machines for sawing.....	Elkanah Leonard....	Canton, Me.....	Nov. 4, 1837
Shingles and heading for barrels, cutting from steamed or boiled timber.....	J. Burt & E. Smith...	Sullivan, N. Y.....	July 9, 1839
Shingle machine.....	Ashael A. Kersey....	Hartford, Ct.....	Oct. 9, 1806
Shingle machine.....	John Loomis.....	Geneva, N. Y.....	Dec. 24, 1812
Shingle machine.....	Otis Paine.....	Foxborough, Mass.	June 18, 1813
Shingle machine.....	William Earle.....	Boston, Mass.....	Dec. 28, 1823
Shingle machine.....	Amasa Andrews.....	Livermore, Me.....	Dec. 29, 1823
Shingle machine.....	James Sawyer.....	Templeton, Mass....	May 4, 1824
Shingle machine.....	Paul Hawes.....	Lockport, N. Y....	Mar. 30, 1837
Shingle machine, (improvement on Hawes's.....	George A. Hoard....	Antwerp, N. Y.....	Sept. 20, 1837

* Antedated September 5, 1840.

† Reissued April 3, 1844.

‡ Reissued Oct. 26, 1838.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Shingle machine.....	Oliver Wheeler.....	Rochester, N. Y....	Nov. 10, 1897
Shingle machine.....	Stillman Howe and Charles Chaffin....	Holden, Mass.....	May 22, 1828
Shingle machine.....	Danforth Wilder.....	Rome, N. Y.....	Aug. 25, 1828
Shingle machine.....	Joel Barnes.....	Cornwall Bridge, Ct.	Oct. 10, 1829
Shingle machine.....	Simeon Wood.....	Holden, Mass.....	Nov. 10, 1829
Shingle machine.....	Parke Jones.....	James City co., Va..	Nov. 12, 1829
Shingle machine.....	John Bush.....	Tippacancoe co., Ind.	Nov. 19, 1833
Shingle machine.....	Tunis J. Burhyte....	Barton, N. Y.....	July 1, 1836
Shingle machine.....	A. S. Pelton.....	Clinton, Conn.....	Oct. 16, 1845
Shingle machine.....	Jonathan Bennet....	Amenia, N. Y.....	July 31, 1846
Shingles, manufacturing.....	William Thomas....	Farm'gton, Mi. Ter.	Aug. 25, 1831
Shingles, manufacturing.....	Cheney Read.....	Worcester, Mass....	Sept. 28, 1831
Shingles, metallic, for roofs.....	Chade Southwick and Israel J. Richardson	Palmyra, N. Y....	April 8, 1835
Shingles, riving, planing and joint- ing.....	Enoch R. Morrison..	Pittsburg, Pa.....	Aug. 8, 1837
Shingles, riving and dressing....	William S. George..	Baltimore, Md.....	May 29, 1841
Shingles, sawed, planing and dress- ing.....	Oliver N. May.....	Windsor, N. Y....	April 20, 1839
Shingles, sawing.....	Isaac Baker.....	Amherst, Mass.....	May 8, 1805
Shingles, sawing.....	Willard Earle.....	Hubbardstown, Mass	Sept. 3, 1813
Shingles, sawing.....	Salmon Fuller.....	Indiana Territory..	Nov. 14, 1814
Shingles, sawing.....	Oliver Merrit.....	Berkhemstead, Ct..	May 22, 1816
Shingles, sawing.....	Jonathan Culver....	Norfolk, N. Y.....	Nov. 15, 1825
Shingles, sawing.....	Ephraim Parker....	Chester co., N. H..	Dec. 17, 1826
Shingles, sawing.....	Willard Foster.....	Oswego, N. Y.....	June 25, 1826
Shingles, sawing.....	Oliver Goddard.....	Bridgetown, Me....	April 6, 1828
Shingles, sawing.....	Nathan Swift.....	Lebanon, Ct.....	June 27, 1827
Shingles, sawing.....	Richard McOmber...	Galway, N. Y.....	Oct. 10, 1829
Shingles, sawing.....	Cheney Read.....	Western, Mass....	April 2, 1828
Shingles, sawing.....	Jonathan Hobbs, jr..	Falmouth, Mass....	Aug. 18, 1831
Shingles, sawing.....	Duncan McArthur and Thomas McKibbin...	Urbana, Ohio.....	Feb. 15, 1832
Shingles, sawing.....	George Knode.....	Montgomery co., Va	Mar. 10, 1834
Shingles, sawing.....	Daniel B. Moore....	Stafford co., N. H..	Aug. 15, 1835
Shingles, sawing.....	Jonathan Hobbs, jr..	Falmouth, Me.....	Sept. 14, 1836
Shingles, sawing.....	Apollos Wilbur....	Burrelville, R. I..	Mar. 25, 1837
Shingles, sawing.....	Samuel Goss.....	Milford, N. H.....	June 3, 1837
Shingles, sawing.....	Zebulon Sargent....	Contoocookville N. H.	Dec. 1, 1837
Shingles, sawing.....	Elnathan Samson....	Plymouth, N. H..	Sept. 5, 1838
Shingles, sawing.....	Elnathan Samson....	Piermont, N. H....	Jan. 10, 1843
Shingles, sawing.....	Israel G. Johnson...	Augusta, Me.....	Aug. 12, 1844
Shingles, sawing, constructing ma- chine for.....	George L. Day.....	Union, N. Y.....	Feb. 4, 1843
Shingles from the stock, sawing..	John W. Smith.....	Montgomery co., Va	April 25, 1834
Shingles and scale board.....	Isaiah Fairfield....	Vassalborough, Me.	April 28, 1830
Shingles, shaving.....	Jacob Balcomb.....	Reading, N. Y.....	July 15, 1809
Shingles, shaving.....	Abiel A. Cooley....	Bolton, Ct.....	July 13, 1810
Shingles, shaving.....	D. Parker & J. Sanford	Sharon, Ct.....	May 30, 1811
Shingles, shaving.....	Augustus R. Benjamin & Philo Bushnell...	Hunter, N. Y.....	May 4, 1833
Shingles, shaving.....	Aaron H. Akin.....	Sparta, Pa.....	Nov. 4, 1837
Shingles, shaving.....	B. Langdon.....	Troy, N. Y.....	Jan. 9, 1838
Shingles, shaving.....	W. Thorn and J. Thorn, jr.....	Plainfield, N. J....	June 7, 1838
Shingles, shaving.....	Simeon Wood.....	Worcester, Mass....	Jan. 15, 1844
Shingles and shaving boards.....	Bill Jarvis.....	New York.....	July 8, 1797
Shingles, shaving and jointing.....	Samuel B. Chapman.	Burlington, N. J..	Mar. 15, 1834
Shingles, splitting and shaving...	David French.....	Connecticut.....	July 25, 1803
Shingles, splitting.....	Jos. Coppinger.....	Baltimore, Md.....	Oct. 31, 1809
Shingles and staves.....	Wm. Bayly.....	Nelson county, Ky	April 10, 1811
Shingles and staves, cutting.....	George Pack.....	Peterborough, N. Y	Nov. 11, 1837
Shingles and staves, dressing....	Jer. McIlvain.....	Chester, Pa.....	April 1, 1807

* Antedated June 15, 1837.

† Relinquished June 12, 1835.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Shingles and staves, dressing....	Daniel Newell.....	Saratoga, N. Y.....	July 26, 1816
Shingles and staves, heading....	David Flagg, jr.....	New York.....	Dec. 28, 1832
Shingles and staves, siding laths..	Richard Hunt.....	Carroll, N. Y.....	Nov. 19, 1833
Shingles and staves, shaving....	Wm. W. Wilkinson....	Wayne, Ohio.....	Sept. 26, 1835
Shingles, veneers, cutting.....	Robert A. Quatermass..	Auburn, Mich.....	Aug. 17, 1843
Slitting boards.....	Ez. Olds.....	Brookfield, Mass....	June 29, 1808
Slitting timber.....	William Barker.....	Kingston, Pa.....	Mar. 25, 1826
Slitting timber.....	R. Beale & M. Bucklin	Grafton, N. H.....	May 23, 1836
Spade and shovel handles.....	Harlow Risley.....	Glastonbury, Ct....	May 1, 1829
Splints, cutting for manufacturing brooms.....	Lyman Gleason.....	Le Roy, N. Y.....	Oct. 9, 1841
Splints, laths, making and splitting timber.....	Benjamin Beach.....	Clarksessville, Ohio..	Nov. 10, 1841
Splints, match cutting.....	John H. Stevens, as- signee of Elisha Fitz- gerald.....	New York.....	July 18, 1840
Splints, match manufacturing....	Norman T. Winans & Thaddeus Hyatt....	New York.....	Nov. 26, 1840
Splints, match cutting.....	John H. Stevens, as- signee of Chauncey E. Warner.....	New York, N. Y.,..	July 2, 1843
Splitting timber.....	Daniel Wright.....	Franklin, N. Y.....	Jan. 15, 1818
Spoke shave.....	Ira L. Beckwith.....	Quincy, Mass.....	April 29, 1837
Square, carpenters'.....	Cyrus Haws.....	Bennington Vt.....	Dec. 15, 1819
Staves, apparatus for jointing....	Horace Baker.....	McLean, N. Y.....	Dec. 9, 1846
Staves, barrel, dressing and joint- ing.....	John H. Lester.....	New London, Conn..	May 9, 1846
Staves for barrels, casks*.....	Samuel Learned.....	Ridgway, N. Y.....	May 30, 1842
Staves, for barrels, jointing....	James Wyman.....	Boston, Mass.....	July 28, 1838
Staves, blind slits, cutting.....	Hardin Branch.....	New York, N. Y.....	May 3, 1839
Staves, crossing and chiming....	Charles F. Beverly... Jonathan Burt and Erasmus Smith....	Salem, Ohio.....	Oct. 16, 1840
Staves, cutting.....	Isaac Hosmer and Wil- liam P. L. Badger..	Sullivan, N. Y.....	June 29, 1839
Staves, cutting.....	Cephas Manning.....	Concord, Mass.....	Sept. 2, 1840
Staves, cutting.....	Oliver Sheldon.....	Acton, Mass.....	Sept. 10, 1840
Staves, cutting.....	Cephas Manning.....	New Marlboro', Mass	Sept. 10, 1840
Staves, cutting.....	Cephas Manning.....	Acton, Mass.....	Sept. 14, 1840
Staves, cutting, for barrels.....	Cephas Manning.....	Acton, Mass.....	April 10, 1841
Staves, cutting, shaving, and joint- ing.....	Thomas Peck.....	Lenox, N. Y.....	Nov. 20, 1837
Staves, cutting, from steamed tim- ber.....	Ebenezer Gregg.....	Derry, N. H.....	Dec. 27, 1833
Stave machine.....	George Pack.....	Sullivan, N. Y.....	Oct. 10, 1835
Staves, cylindrical, for dressing..	John Miner and Silas Merrick.....	Fallstown, Pa.....	Nov. 12, 1845
Staves, double, and parallel jointer	John R. Averill.....	Manchester, N. Y....	Dec. 29, 1824
Staves, dressing.....	Joseph S. Keen.....	Philadelphia, Pa....	Oct. 1, 1816
Staves, dressing.....	Levi Benton.....	Hanover, N. Y.....	July 12, 1828
Staves, dressing.....	Charles B. Goodrich..	Rutland, Mass.....	Feb. 3, 1829
Staves, dressing.....	Charles B. Goodrich..	Rutland, Mass.....	May 10, 1830
Staves, dressing.....	William Thomas.....	Pomfret, N. Y.....	Oct. 7, 1830
Staves, dressing.....	John G. Conser.....	Rebersburg, Pa....	Jan. 31, 1831
Staves, dressing.....	Lemuel Read and Al- fred Willoughby... Ashahel Fairchild..	Rochester, N. Y....	Sept. 16, 1833
Staves, dressing.....	Joseph Sweet.....	Queensbury, N. Y....	Dec. 17, 1834
Staves, dressing, for barrels.....	Solomon Crumber....	Boro' of Muncey, Pa.	Oct. 28, 1835
Staves, dressing, heading, and joint- ing.....	John G. Tackles.....	Puckhorn, Pa.....	Mar. 18, 1834
Staves, dressing and jointing....	John G. Tackles.....	Pomfret, N. Y.....	July 20, 1831
Staves, dressing, revolving.....	Hervey Law.....	Wilmington, N. C....	July 15, 1840
Staves and heads for barrels.....	Charles B. Goodrich..	Rutland, Mass.....	Feb. 4, 1829
	Barnabas Langdon and William Mowry....	Washington co., N. Y.	June 20, 1811

* Antedated November 30, 1841.

† Reissued December 28, 1846.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Staves, heading and dressing.....	Abner Sterns, jr.....	Scaghticoke, N. Y..	Mar. 22, 1890
Staves and shingles, heading of barrels.	John Everhart, Jacob Pearson, John Morford, and Nathan Everhart.....	Wayne, Ohio.....	Oct. 6, 1835
Staves, jointing.....	Charles B. Goodrich.....	Rutland, Mass.....	May 20, 1830
Staves, jointing.....	George Ely.....	Clarence, N. Y.....	April 14, 1831
Staves, jointing.....	Isaac Fobes.....	Bridgewater, Mass.....	Aug. 3, 1831
Staves, jointing.....	Philip Cornell.....	Brutus, N. Y.....	April 11, 1832
Staves, jointing.....	Cyrus McGregory.....	Newport, N. H.....	Aug. 26, 1834
Staves, saw.....	Sumner King.....	Chittenango, N. Y.....	Aug. 29, 1833
Staves, saw.....	Harvey Holmes.....	New Marlboro', Mass.....	Jan. 21, 1835
Staves, saw.....	Hart Pepper.....	Southwick, Mass.....	Feb. 5, 1835
Staves, sawing.....	Daniel Toms.....	Auburn, N. Y.....	Mar. 2, 1830
Staves, sawing.....	Charles M. Keller.....	Washington, D. C.....	June 30, 1836
Staves, sawing.....	William Bell.....	Lexington, Ky.....	Sept. 22, 1838
Staves, sawing and jointing.....	Nathaniel Moor.....	Ellsworth, Maine.....	June 19, 1838
Staves, sawing and jointing.....	William Laney and Solomon Merrick.....	Springfield, Mass.....	Sept. 25, 1838
Staves, sawing.....	Harvey Holmes.....	New Marlboro', Mass.....	Dec. 20, 1837
Staves, sawing.....	Royal E. House.....	Choconut, Pa.....	Aug. 12, 1839
Staves, sawing.....	Hart Pepper.....	Southwick, Mass.....	Sept. 3, 1839
Staves, sawing bilged, for barrels.	Robert Stewart.....	Michigan City, Ind.....	Nov. 25, 1841
Staves, sawing and jointing.....	Sumner King.....	Suffield, Conn.....	Sept. 14, 1839
Staves, sawing, for barrels.....	Cyrus McGregory.....	Newport, N. H.....	July 2, 1836
Staves, sawing, for barrels.....	Jesse J. Smith.....	Brutus, N. Y.....	Mar. 3, 1837
Staves, sawing, jointing, and smoothing.....	Daniel Toms.....	Auburn, N. Y.....	July 8, 1830
Staves, sawing or rounding.....	Philip Cornell.....	Weedsport, N. Y.....	Jan. 5, 1833
Staves, sawing, (improvement on Toms').....	Jesse C. Smith and John Price, jr.....	Cayuga county, N. Y.....	Jan. 21, 1834
Staves, shaving and listing.....	Daniel North and H. Naramor.....	Caledonia, N. Y.....	Nov. 26, 1824
Staves and shingles, shaving and heading.....	John Everhart.....	Waynesville, Ohio.....	June 12, 1835
Staves and hoops, splitting.....	Ziba Bisbee.....	E. Bridgewater, Mass.....	June 5, 1830
Staves for truss hoops.....	Amory Amaden.....	Bloomfield, N. Y.....	July 27, 1827
Tenons, cutting.....	E. Basford and E. Johnson.....	Livermore, Mass.....	April 28, 1810
Tenons, cutting.....	William H. Harn.....	Chambersburg, Pa.....	Oct. 26, 1842
Tenons, cutting, by revolving cylinders.....	Josiah Fay.....	Hollis, N. H.....	Aug. 29, 1831
Tenons, cutting round.....	Mahlon Gregg.....	Philadelphia, Pa.....	Dec. 10, 1840
Tenons, sawing.....	Charles Thompson.....	Poughkeepsie, N. Y.....	Dec. 6, 1830
Tenoning machine.....	Henry Mellish.....	Walpole, N. H.....	Nov. 19, 1833
Tenoning machine.....	James Biggs.....	New York.....	Nov. 12, 1845
Tenoning and mortising machine.	Elbridge Lyman.....	Northfield, Mass.....	May 25, 1844
Timber, bending.....	E. Green and M. Blakeley.....	Litchfield, Conn.....	Mar. 20, 1822
Timber, bending.—See Class 7.			
Timber, boring.....	Riley Smith.....	Towanda, Pa.....	Feb. 10, 1843
Timber, fire wood, &c., cross cutting.....	Thomas J. Marsh.....	Liberty, Indiana.....	Sept. 28, 1843
Timber, hewing, dubbing.—See Class 7.			
Tools.—See Class 2.			
Tonguing, grooving, &c., boards, side cutter head.....	Walter M. Hutton.....	Troy, N. Y.....	Oct. 26, 1838
Tonguing, grooving, and heading boards.....	Samuel Shepherd and D. Baldwin.....	Nashua, N. H.....	Feb. 21, 1838
Tonguing, grooving, and heading boards.....	Frederick Fredley.....	Sugar Valley, Pa.....	Sept. 15, 1838
Tonguing and grooving machine..	Charles W. Brown.....	Boston, Mass.....	Aug. 14, 1844
Tools used in the manufacture of barrels.....	William G. Burt.....	Mount Pleasant, N. Y.....	Oct. 12, 1839

* Reissued December 6, 1892, and January 29, 1894,

† Antedated August 21, 1837.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED
Tubs, cutting wood for sides of..	Jer. Bailey.....	Philadelphia, Pa....	April 7, 1827
Tubs, manufacturing.....	Palmer Phillips.....	Busti, N. Y.....	May 20, 1830
Tubs, pails.....	Robert U. Richards...	Winchester, Conn..	Feb. 19, 1824
Veneering.....	Augustus McBurth, assignor to T. R. Hibbard.....	New York, N. Y....	July 28, 1846
Veneers, cutting.....	Caleb B. Burnap.....	Belfast, Maine.....	May 1, 1829
Veneers, cutting.....	James Hamilton.....	City of New York..	Nov. 10, 1836
Veneers, cutting.....	Joseph Skinner.....	Stockbridge, Mass..	Sept. 21, 1837
Veneers, cutting.....	William R. Greenleaf and Alonzo Cole....	Gerry, N. Y.....	Feb. 18, 1840
Veneers, cutting.....	John Dresser.....	Stockbridge, Mass..	Sept. 3, 1840
Veneers, cutting.....	William Foster.....	New York.....	Sept. 1, 1843
Veneers, cutting and straightening	Chauncey E. Warner	New York.....	Dec. 4, 1843
Veneers, cutting saw for.....	R. B. Richardson....	Philadelphia, Pa....	Oct. 6, 1824
Veneers, cutting from the circumference of a log.....	John Humphrey....	Harrington, N. J...	Oct. 26, 1842
Veneering curved surfaces.....	William Iba, assignee of Casper Kittinger.	East Greenville, O.	Nov. 21, 1842
Veneers, glueing, on columns...	Benjamin Hinckley..	Fayette, Maine.....	April 27, 1830
Veneers, laying on ogee and other mouldings.....	John Soule.....	New Bedford, Mass.	Aug. 31, 1836
Veneers, ploughing.....	William Stillman....	Rhode Island.....	Mar. 16, 1801
Veneer saw frame.....	Benjamin Brehore....	Milton, Mass.....	May 22, 1826
Veneers, sawing.....	Adam Stewart.....	Baltimore, Md.....	July 5, 1817
Veneers, sawing.....	John P. Allen.....	Manchester, Mass..	Dec. 7, 1826
Veneers, sawing.....	Amos F. Smith.....	Salem, Mass.....	Sept. 10, 1829
Veneers, sawing.....	Caleb B. Burnap.....	New York.....	Dec. 14, 1830
Veneers, sawing, and pannel cutting.	John White and P. Quimby.....	Belfast, Maine.....	Sept. 12, 1829
Veneers, shaving.....	Sylvanus Bonnel....	New Jersey.....	Feb. 28, 1816
Veneers, straight or curved, laying on.....	Casper Kittinger....	Massillon, Ohio....	Mar. 14, 1840
Veneers and tenons, slitting.....	John McClintic.....	Chambersburg, Pa..	April 21, 1829
Vice, standing or bench.....	Lawren M. Peck.....	Philadelphia, Pa....	July 18, 1844
Ware, wooden.....	L. Z. Parke.....	Windham, N. Y....	July 14, 1825
Ware, wooden.....	Elisha Briggs.....	Perry, N. Y.....	July 30, 1827
Ware, wooden, without staves...	John Patridge.....	Zaneville, Ohio....	April 16, 1831
Washboard.....	Stephen Rust.....	Manlius, N. Y.....	Feb. 9, 1833
Washboard, fluting and counter fluting.....	Edward Loud.....	Winchindon, Mass..	Mar. 8, 1834
Water tables for doors.....	Nathaniel Briggs....	Windham, N. Y....	June 17, 1809
Weather strips to bottom of doors	Isaac D. Brower....	City of New York..	July 29, 1837
Wood, manufacturing, to be used as a substitute for curled hair in stuffing beds.....	William Baker.....	Utica, N. Y.....	May 20, 1842
Wood, shaving.....	William Rose.....	Philadelphia, Pa....	Sept. 3, 1844

CLASS No. XV.

STONE & CLAY MANUFACTURES,

**Including Machines for Pottery, Glass-making, Brick-making,
Dressing and Preparing Stone, Cements,
and other Building Materials.**

LIST OF PATENTS.

CLASS XV.—STONE AND CLAY MANUFACTURES, including Machines for Pottery, Glass-making, Brick-making, Dressing and Preparing Stone, Cements, and other Building Materials.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Brick, air conducting, for stoves..	Ephraim Treadwell...	Essex co., Mass....	Sept. 12, 1816
Brick, burning.....	Nath'l Adams & Aaron Noyes.....	Newbury, Ky.	Dec. 28, 1829
Brick, burning*.....	Joel W. Andrews....	Norristown, Pa....	Mar. 21, 1843
Brick, cornice.....	Thomas K. Beale....	Alexandria, D. C....	May 26, 1814
Brick, fire, machine.....	Ebenezer Jenks.....	Canaan, Ct.....	April 18, 1807
Brick, fire-proof.....	Tim. Caldwell.....	Philadelphia, Pa....	July 21, 1823
Brick, fire-proof.....	Richard W. Smith....	Baltimore, Md.....	Sept. 27, 1825
Brick, fire and water-proof.....	Thos. S. Sherman....	Scriba, N. Y.....	Dec. 30, 1833
Brick, frame, portable, for raising	E. Mann & G. Hill...	Rochester, N. Y....	July 21, 1827
Brick machine.....	Richard Mansfield...	Connecticut.....	Oct. 28, 1800
Brick machine.....	Ezra Miller.....	New York.....	July 17, 1802
Brick machine.....	John F. Gould.....	Newburyport, Mass.	Mar. 1, 1806
Brick machine.....	Asa Ross.....	Cazenovia, N. Y....	Sept. 21, 1808
Brick machine.....	James B. Harris.....	Philadelphia, Pa....	Aug. 21, 1810
Brick machine.....	James Gregg.....	New Hampshire....	May 7, 1811
Brick machine.....	James McDonald.....	New York.....	April 1, 1812
Brick machine.....	John Menefee.....	Landry Parish, La..	Aug. 7, 1823
Brick machine.....	Seth Lewis.....	Louisiana.....	Feb. 11, 1824
Brick machine.....	James Lee.....	Ogden, N. Y.....	Mar. 11, 1824
Brick machine.....	James Lee & J. Ring.	Ogden, N. Y.....	June 11, 1825
Brick machine, (improvement on Lee's).....	Tim. P. Kneeland....	Ogden, N. Y.....	June 21, 1825
Brick machine.....	David Rising.....	Atcheater, Vt.....	Mar. 21, 1827
Brick machine.....	David Rising.....	Colchester, N. Y....	Jan. 29, 1828
Brick machine.....	David Flagg.....	Gardiner, Me.....	Mar. 19, 1828
Brick machine.....	Eben Duty & D. W. Duty.....	Painesville, Ohio....	June 7, 1828
Brick machine, (improvement on McDonald's.)	Jas. McDonald and R. McQueen, jr.....	New York.....	Nov. 19, 1828
Brick machine.....	John S. Hanna.....	Mercer, Pa.....	Nov. 23, 1829
Brick machine†.....	Nathaniel Adams.....	Cornwall, N. Y....	June 22, 1830
Brick machine.....	J. M. Bannister.....	Phelps, N. Y.....	June 19, 1835
Brick machine.....	George W. Gilbert....	Pittsburg, Pa.....	Aug. 15, 1835
Brick machine.....	John Moffat.....	Buffalo, N. Y.....	Mar. 8, 1836
Brick machine.....	Nathaniel Adams.....	Newburgh, N. Y....	April 13, 1836
Brick machine.....	Gooding Halloway....	Montgomery co., Pa.	April 21, 1836
Brick machine.....	Colvin Waterman....	Bath, Me.....	July 2, 1836
Brick machine.....	Gaylord V. Harper....	Franklinville, N. Y.	Oct. 23, 1837
Brick machine.....	Lee Montgomery.....	Tunnel, Md.....	July 8, 1843
Brick machine, moulding.....	Joseph P. Owen.....	Upper Alton, Ill....	April 10, 1843
Brick machine.....	Thomas Hartley.....	Pittsburg, Pa.....	April 11, 1846
Brick, machine for making.....	Samuel Lowery.....	Philadelphia, Pa....	April 18, 1846
Brick machine.....	Joel L. Ransom.....	Millport, N. Y.....	April 4, 1846
Brick, machine for making.....	John Simpson.....	Decatur, Ga.....	April 25, 1846
Brick, making.....	David Ridgeway.....	Philadelphia, Pa....	Mar. 7, 1792
Brick, making.....	Christopher Colles....	New York.....	Jan. 26, 1793
Brick, making.....	Apollo Kinsley.....	New York.....	Feb. 1, 1793
Brick, making.....	William Mitchell.....	Henrico, Va.....	June 24, 1816
Brick, making.....	William Mitchell.....	Springhill, Va.....	May 28, 1817
Brick, making.....	Adam Stewart.....	Baltimore, Md.....	April 8, 1819
Brick, making.....	Seth Belknap.....	Newbury, N. Y.....	May 17, 1821

* Additional improvement, April 4, 1846.

Revised Oct. 14, 1894.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Brick, making	Richard Roberts	Berlin townsh'p, Ohio	Mar. 2, 1833
Brick, making	Jesse Reeder	Cincinnati, Ohio....	Feb. 15, 1833
Brick, making	Samuel C. Brusster...	Kensington dist., Pa.	April 14, 1833
Brick, making	J. Parsons Owen	Cincinnati, Ohio....	July 26, 1845
Brick, making, and clay, grinding	William Mitchell.....	Richmond, Va.	Mar. 26, 1817
Brick, making, and drying	James Hodges.	Fairplay, S. C.	June 3, 1837
Brick, making, and pan tile.....	Samuel Bronwer	Massachusetts.....	Aug. 17, 1793
Brick, mixing earth for.....	Benj. K. Hill.....	Richmond co., Ga.	Feb. 17, 1837
Brick, and mortar.....	Amos Parker.....	Sweden, Me.	Mar. 5, 1830
Brick, and mortar, alternate lift.	Benj. Dearborn.....	Boston, Mass.	June 20, 1816
Brick, mould	Benj. H. Brown	Alexandria, D. C.	Oct. 23, 1837
Brick, moulding	Honore Mane	Point Coupee, La.	Nov. 23, 1822
Brick, moulding	Daniel Watson.....	Fayetteville, Me.	May 6, 1836
Brick, moulding	Ezra Fisk.....	Fayette, Me.	June 9, 1836
Brick, moulding	David Fox.....	Ashtabula, Ohio.....	Aug. 15, 1831
Brick, moulding	John Drummond	Whitestown, N. Y.	Mar. 6, 1832
Brick, moulding	William C. Grimes	York, Pa.	Dec. 2, 1834
Brick, moulding	Daniel Wolfe.....	Mount Vernon, Ohio	Dec. 23, 1834
Brick, moulding	Robert Rankin.....	Frankfort, Me.	Dec. 24, 1834
Brick, moulding	James Coppuck.....	Louisville, Ky.	July 1, 1836
Brick, moulding	Loomis E. Ransom	Millport, N. Y.	Jan. 9, 1838
Brick, moulding	John Bolton.....	Saratoga Sp'gs, N.Y.	Aug. 23, 1838
Brick, moulding	John Booth and Wm. H. Stevenson.....	Columbus, Miss.	Jan. 6, 1844
Brick, moulding	Wm. T. Peters, ex'or of Ithiel Town.....	New Haven, Ct.	Sept. 27, 1844
Brick, moulding and drying.....	Charles Vassar	Poughkeepsie, N. Y.	Nov. 1, 1830
Brick, moulding and pressing....	John M. Brookings....	Wiscasset, Me.	June 23, 1826
Brick, moulding and pressing....	James McDonald.....	New York	April 24, 1827
Brick, moulding and pressing....	Daniel Barnford.....	Deerfield, N. Y.	April 28, 1832
Brick, moulding and pressing....	David Phillips.....	Natchez, Miss.	June 23, 1832
Brick, moulding and pressing....	Cyrus Chaney.....	Prospect, Me.	Sept. 11, 1834
Brick, moulding and pressing....	Nathaniel Adams.....	Cornwall, N. Y.	Sept. 8, 1837
Brick, moulding and pressing....	Henry Waterman.....	Bath, Me.	Nov. 4, 1837
Brick, moulding and pressing....	S. Watterman and C. Learned.....	Charleston, S. C.	April 14, 1838
Brick, moulding, and tempering clay.....	John C. Porter.....	Powhatan co., Va.	Dec. 29, 1830
Brick, preparing mortar for.....	Oran W. Seely.....	Williamson, N. Y.	July 20, 1831
Brick press	Benjamin Porter	Salem, Mass.	May 18, 1814
Brick press	Benjamin Rolfe.....	During, N. H.	April 30, 1822
Brick press	Samuel Briggs.....	Salem, Mass.	Jan. 11, 1823
Brick press	Briggs R. Reid.....	Danvers, Mass.	May 29, 1823
Brick press	David Flagg, jr.....	Gardiner, Me.	Dec. 13, 1824
Brick press	Mark Twitchell.....	Gray, Me.	Sept. 24, 1825
Brick press	Thomas Norcross.....	Hallowell, Me.	Dec. 31, 1825
Brick press	Julius Willard.....	Baltimore, Md.	May 2, 1826
Brick press	Ephraim Mayo.....	Hallowell, Me.	June 24, 1826
Brick press	Alfred B. Crossman.....	Huntington, N. Y.	Feb. 9, 1827
Brick press	John How	Alna, Me.	May 18, 1827
Brick press	Ephraim Mayo.....	Hallowell, Me.	Dec. 9, 1828
Brick press	John Woodson.....	Rockbridge co., Va.	Sept. 10, 1828
Brick press	Archibald McClung	Fairfield, Va.	Mar. 26, 1831
Brick press	John Sites	Harrisburg, Va.	Mar. 29, 1831
Brick press	Thomas A. Irick.....	Harrisburg, Va.	July 27, 1831
Brick press	David M. Crellis.....	Sandwich, N. H.	Aug. 11, 1832
Brick press	William C. Grimes.....	York, Pa.	Dec. 2, 1834
Brick press	Nathan Sawyer.....	Mount Vernon, Ohio	April 8, 1835
Brick press	Wm. Wadsworth.....	Hartford, Ct.	June 26, 1835
Brick press	Nathan Read.....	Belfast, Me.	Aug. 20, 1835
Brick press	Phineas Ball.....	Mount Vernon, Ohio	Mar. 2, 1836
Brick press	Andrew F. Mervine.....	St. Louis, Mo.	Sept. 12, 1837
Brick press	Henry Waterman.....	Bath, Me.	Nov. 20, 1837
Brick press	Gaylord V. Harper.....	Batavia, N. Y.	April 25, 1838

* Additional improvement, Aug. 12, 1838.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Brick press.....	Stephen Ustick, ass'ed to C. P. Bronson....	Philadelphia, Pa....	Dec. 28, 1838
Brick press.....	A. K. Fahnestock....	Harrisburg, Pa....	April 16, 1842
Brick press.....	Antoine Carbonel....	Philadelphia, Pa....	May 12, 1842
Brick press.....	Alfred Hall.....	Cleveland, Ohio....	Sept. 3, 1842
Brick press.....	Mark Twitchell.....	Gray, Me.....	June 10, 1844
Brick press.....	Jeffery Smedley.....	Columbia, Pa.....	Aug. 28, 1844
Brick press.....	C. B. Baker and E. Gifford.....	Troy, N. Y.....	Sept. 7, 1844
Brick press.....	Nathan Sawyer.....	Baltimore, Md.....	Sept. 27, 1844
Brick press.....	Benjamin H. Brown....	Philadelphia, Pa....	Oct. 3, 1844
Brick press.....	Daniel Carpenter....	Cortland, N. Y.....	July 26, 1849
Brick press.....	Julius Willard.....	Baltimore, Md.....	Jan. 29, 1840
Brick press.....	James Hodge.....	Fairplay, S. C.....	Mar. 6, 1840
Brick press.....	Samuel Talbot.....	Richmond, Va.....	April 8, 1840
Brick press.....	Thomas Conklin.....	Woodville, Miss....	Jan. 23, 1841
Brick press.....	Thomas W. Smith.....	Alexandria, D. C....	Jan. 30, 1841
Brick press.....	Waldren Beach & Eph. Lukens.....	Baltimore, Md.....	May 22, 1841
Brick press.....	Charles G. Brown....	Caldwell's, N. Y....	Oct. 11, 1841
Brick press.....	John Waite.....	Leicester, Mass....	Mar. 12, 1845
Brick press.....	William Sanford.....	Cambridge, Mass....	Sept. 9, 1845
Brick press.....	Thomas Culbertson....	Cincinnati, Ohio....	May 16, 1846
Brick press.....	Arad Woodworth.....	Worcester, Mass....	May 8, 1843
Brick press, moulding and pressing brick.....	Stacy Costill.....	Philadelphia, Pa....	Sept. 4, 1840
Brick press, and tile.....	Joseph B. Wilson....	Malden, Mass.....	Sept. 30, 1841
	Alfred R. Crossman....	Huntingdon, Mass....	
Brick press, bridle.....	Julius Willard.....	Baltimore, Md.....	June 10, 1830
Brick press, bridle.....	Jared G. Talcott.....	Glasterbury, Ct....	Oct. 1, 1830
Brick press, compound.....	John Moore.....	Gardiner, Me.....	Aug. 24, 1825
Brick press, and delivering.....	Ulysses Ward.....	Washington, D. C....	Dec. 15, 1835
Brick press, for dry clay.....	N. Sawyer & T. W. Smith.....	Washington, D. C....	Aug. 13, 1838
Brick press, for dry clay.....	Benj. H. Brown.....	Washington, D. C....	Dec. 8, 1838
Brick press, and finishing.....	Charles Hinkle.....	Allentown, Pa.....	June 1, 1833
Brick press, and self-moulding.....	John Winslow.....	Portland, Me.....	Dec. 8, 1826
Brick press, and spiral moulding.....	James Parker.....	Gardiner, Me.....	Mar. 28, 1826
Brick press, and wheel, beating.....	Thos. Norcross & Geo. Pollard.....	Hallowell, Me.....	Oct. 1, 1825
Brick, shape of, for roofs.....	James Parker.....	Gardiner, Me.....	Aug. 15, 1835
Brick, stocks, tile.....	David Flagg, jr., and Amos Parker.....	Sweden, N. Y.....	Dec. 28, 1832
Brick, striker.....	Peleg Sweet.....	Ashtabula, Ohio....	Feb. 20, 1835
Brick, striking.....	Andrew W. Duty.....	Sangerfield, N. Y....	Mar. 7, 1833
Brick, tempering mortar for.....	Apollos Kinsley.....	New York.....	Dec. 20, 1793
Brick and tile.....	John Hawkins.....	New Jersey.....	July 11, 1797
Brick and tile.....	George Hadfield.....	Washington, D. C....	May 15, 1800
Brick and tile.....	Nathaniel and Philip W. Miller.....	Massachusetts.....	Jan. 5, 1804
Brick and tile.....	William Hodgson.....	Richmond, Va.....	May 22, 1805
Brick and tile.....	John F. Gould.....	Newburyport, Mass..	Oct. 17, 1809
Brick and tile.....	Daniel French.....	New York.....	Aug. 22, 1810
Brick and tile.....	J. E. Stubbs and J. Bonner.....	Cincinnati, Ohio....	May 10, 1822
Brick and tile.....	E. Fisk & B. Hinkley	Fayette, Me.....	Sept. 8, 1827
Brick and tile.....	James Wood.....	Rockland co., N. Y....	Mar. 3, 1829
Brick and tile.....	Benton P. Coston....	Sterling, Pa.....	Oct. 22, 1835
Brick and tile.....	Benjamin Hamblet....	Portland, Me.....	Dec. 28, 1835
Brick and tile press.....	Samuel Lane.....	Hallowell, Me.....	Sept. 30, 1825
Brick and tile press.....	James Parker, M. D....	Gardiner, Me.....	Nov. 29, 1828
Brick treading.....	Briggs R. Reed.....	Danvers, Mass.....	May 29, 1823
Clay, breaking.....	Nathaniel Boynton....	Danville, Vt.....	Feb. 27, 1833
Clay, mixing.....	Aaron Parkhurst.....	Scriba, N. Y.....	April 11, 1831

* Reissued Dec. 2, 1836.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WEEK ISSUED.
Clay, mixing.....	Jesse Chapman.....	Mad River town ^p , O.	June 2, 1832
Clay, mixing, and making brick..	David Phillips & John D. Drummond	Whitestown, N. Y..	May 15, 1832
Clay and mortar, mixing for making brick.....	Ansel Teall	Waterloo, N. Y....	Mar. 12, 1839
Clay, moulding and pressing, applied to the construct'n of fences	Mercy Wright	Talbytown, Pa	May 15, 1841
Clay, potters', cleansing and tempering.....	Miller and Roller	Manchester p.o., Md	July 31, 1846
Clay, potters', purifying.....	Adam Weber	Womelsdorf, Pa....	Sept. 9, 1835
Clay, soap, fire-proof, for roofs..	Hezekiah Steel	Hudson, N. Y.	June 29, 1833
Clay, tempering.....	John Matthews.....	Baltimore, Md	July 6, 1803
Clay, tempering and preparing...	Nathaniel Adams	Cornwall, N. Y.	Dec. 16, 1833
Clay, tempering for bricks	Richard Stillman.....	Kensington, Pa. . }	April 21, 1842
Clay and sand, grinding.....	Jesse Taylor	Spring Garden, Pa }	
Crucible making.....	Alfred Cushman	Summer, Me	Mar. 3, 1829
Earthen ware.....	James Dalliba	Watervliet, N. Y.	Sept. 26, 1823
Flower pots or vases for plants...	Joseph Smolinski.....	Philadelphia, Pa....	Mar. 28, 1838
Glass blowing machine.....	Joseph Adams.....	Boston, Mass.....	Sept. 3, 1840
Glass blowing machine.....	Joseph Stouvenel and Fr. A. Martin.....	Philadelphia, Pa....	April 16, 1833
Glass bottles, decanters.....	Thos. Bakewell & John P. Bakewell	Pittsburgh, Pa	Feb. 8, 1834
Glass cases.....	John M. Gann.....	Kensington, Pa	Nov. 26, 1830
Glass, composition.....	Thomas W. Whitley.	Paterson, N. J.	April 21, 1836
Glass, cooling and generating ovens for.....	William Price.....	Pittsburgh, Pa	April 30, 1816
Glass, cylinder, window, flattening	John Franck	Milville, N. J.	May 12, 1843
Glass, flattening and annealing*	William Coffan, jr ...	Hammoncton, N. J. .	Oct. 1, 1830
Glass, flattening†.....	Samuel Richards.....	Philadelphia, Pa....	April 6, 1842
Glass, frames for looking glasses.	John J. Adams.....	Washington, D. C. .	April 21, 1832
Glass furnaces.....	John Scott	Philadelphia, Pa....	April 6, 1831
Glass furnaces.....	Jac. Stanger and Dan'l H. Miller	Philadelphia, Pa....	Aug. 18, 1815
Glass furnace.....	Deming Jarves	Boston, Mass.....	Sept. 19, 1846
Glass furniture.....	New England Glass Company, assignees of Thos. Leighton...	Cambridge, Mass ..	Oct. 3, 1846
Glass hones.....	John P. Bakewell....	Pittsburgh, Pa	Sept. 9, 1825
Glass, machine for blowing.....	Alex. Gordon and John P. Bakewell.....	Pittsburgh, Pa	Dec. 8, 1839
Glass, manufacturing.....	Joshua Laird.....	Pittsburgh, Pa	Dec. 14, 1832
Glass, manufacturing.....	Thomas Bakewell....	Pittsburgh, Pa	Mar. 3, 1815
Glass, manufacturing, use of salt from ley.....	William Price.....	Pennsylvania.....	Mar. 4, 1816
Glass, melting and fusing.....	G. H. Burgin	Philadelphia, Pa....	April 3, 1829
Glass, moulding.....	Thomas W. Dyott....	Philadelphia, Pa....	Oct. 10, 1826
Glass, moulds, combination of...	Deming Jarves.....	Boston, Mass.....	Dec. 1, 1826
Glass, moulds for opening glass blowers.....	G. & P. C. Dummer & J. Maxwell	Jersey city, N. J....	Oct. 16, 1827
Glass moulds for pressing.....	Deming Jarves	Boston, Mass.....	Feb. 2, 1821
Glass, moulds for making.....	Hiram Dillaway.....	Boston, Mass.....	Aug. 21, 1841
Glass, moulds for pressing.....	Deming Jarves	Boston, Mass.....	May 28, 1830
Glass phials, essence, tubular...	Phineas C. Dummer .	Jersey city, N. J. .	Oct. 16, 1827
Glass, pressing in moulds.....	John Stainford	Boston, Mass.....	Oct. 17, 1831
Glass and stone, grinding.....	Joseph Magoun	East Cambridge, Mas	Dec. 6, 1845
Glasses, luminous, for orreries...	Peter Cooper	New York.....	Mar. 24, 1835
Glass, window, flattening and tempering.....	Morris J. Gardiner...	York, Pa.....	April 30, 1832
Granite, cutting and dressing†...	John J. Adams.....	Winslow, N. J.....	Oct. 17, 1842
Granite, cutting and dressing.....	John D. Buzzell	Cape Elizabeth, Me.	June 2, 1836
	Wm. C. Poland and Earle Blossom.....	Portland, Me.....	Nov. 11, 1837

* Antedated April 1, 1842.

† Reissued May 16, 1842, Winslow, N. J.

‡ Reissued May 12, 1837.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Granite, hammering and dressing.	William Morse.....	Corinna, Me.....	Sept. 5, 1838
Gypsum, applied to cisterns.....	J. Flint & Clark Mills	New York city.....	Mar. 4, 1836
Hammer.—See <i>Stone, Class 2.</i>			
Hammer, cutting & dressing stone	Joseph Richards.....	Braintree, Mass....	Feb. 20, 1838
Hammer, for dressing stone.....	Galen H. Pierce.....	Middlebury, Mass....	Dec. 17, 1834
Hammer, pecking stone.....	Bela Gardner.....	Ashfield, Mass.....	Aug. 3, 1838
Kiln, brick.....	Robert Crutchfield...	Botetourt county, Va	Feb. 7, 1834
Kiln, brick.....	John Duff.....	Washington, D. C....	Oct. 31, 1825
Kiln, brick.....	Aaron Noyes.....	Newburg, N. Y.....	Dec. 28, 1829
Kiln, brick.....	Henry Read.....	Kensington, Pa.....	June 17, 1840
Kiln, brick, covering.....	Samuel R. Bakewell..	Wellsburg, Va.....	May 10, 1826
Kiln, brick, and lime, and boiling kettles.....	Solomon Hill.....	New Milford, Ct....	Feb. 12, 1837
Kiln, for earthenware.....	James Hassell.....	Elizabethtown, N. J.	Oct. 21, 1815
Kiln, lime.....	Peter Lossing.....	New York.....	Aug. 4, 1800
Kiln, lime.....	Thomas Power.....		July 12, 1804
Kiln, lime.....	William Gorsuch.....	Baltimore, Md.....	Aug. 17, 1811
Kiln, lime.....	Thomas Power.....	Hudson, N. Y.....	Jan. 7, 1817
Kiln, lime.....	George Harper.....	Jenkentown, Pa.....	Jan. 22, 1817
Kiln, lime.....	Jacob Swope.....	Lancaster, Pa.....	Mar. 14, 1817
Kiln, lime.....	Abel Jeans.....	Mill C'k Hund'd, Del	Feb. 15, 1837
Kiln, lime.....	Louis Bomeisler.....	Philadelphia, Pa.....	Sept. 10, 1839
Kiln, lime.....	Jos. M. Downing.....	Bristol, Pa.....	Aug. 25, 1831
Kiln, lime.....	Samuel Griscom.....	Reading, Pa.....	June 26, 1832
Kiln, lime.....	Thomas H. Powers.....	Sodus, N. Y.....	April 17, 1833
Kiln, lime.....	A. H. Tyson.....	Baltimore, Md.....	Sept. 28, 1839
Kiln, lime, regulating draught of.	Isaac Richardson.....	Paoli, Pa.....	Feb. 21, 1840
Kiln for seasoning wood.—See <i>Clas</i>	as 14, <i>Seasoning.</i>		
Knobs of clay.....	J. G. Hotchkins, Jno. A. Davenport & John W. Quincy.....	New York.....	July 29, 1841
Lime, manufacturing from marle.	Jedediah Peasley.....	Vermont.....	Feb. 1, 1803
Lime, process of burning*.....	Samuel Garber & Hen. Swartzengrover.....	Norristown, Pa.....	Mar. 25, 1837
Lime, reducing calcareous matter into.....	Charles Varle.....		May 2, 1806
Marble cutting.....	Joseph F. Mangin.....	New York.....	Feb. 16, 1797
Marble, cutting and polishing.....	Samuel Mulliken.....	Philadelphia, Pa.....	Mar. 11, 1791
Marble, cutting and sawing.....	Arch. McAllister.....	Salem, N. Y.....	Feb. 18, 1828
Marble, &c., dressing.....	John D. Buzzell.....	Cape Elizabeth, Me.	Aug. 13, 1838
Marble, grooving and beading...	Harlow J. Torrey.....	New York.....	Nov. 1, 1825
Marble, or pipe stone turner.....	David Clarke.....	W. Stockbridge, Mas	April 9, 1810
Marble, rubbing and scouring.....	Elijah Ferris.....	West Chester, N. Y.	Mar. 7, 1826
Marble, sawing.....	Jona. Dickerson.....	New Jersey.....	Jan. 9, 1796
Marble, sawing.....	James F. Mangin.....	New York.....	July 2, 1796
Marble, sawing.....	Eb. W. Judd.....	Middleburg, Vt.....	Aug. 14, 1822
Marble, sawing†.....	Isaac D. Kirk.....	Philadelphia, Pa.....	July 3, 1833
Marble, sawing.....	Charles B. Austin.....	Kensington, Pa.....	Dec. 24, 1833
Marble, sawing, moulding, &c....	Isaac D. Kirk.....	Philadelphia, Pa.....	Feb. 26, 1833
Marble, sawing and polishing.....	Luther Bissell.....	Otsego, N. Y.....	June 7, 1811
Marble, smoothing and polishing	Harlow J. Torrey.....	New York.....	Nov. 1, 1825
Marble, smoothing and polishing.	Sam'l Risley, adm'r of Richard S. Risley.....	Philadelphia, Pa....	June 14, 1834
Marble, polishing.....	J. Eckstein and H. D. Moore, assignees of Jacob Zeigler.....	Philadelphia, Pa....	Mar. 12, 1845
Marble & stone, cutting & polishing	Anson Clarke.....	W. Stockbridge, Mas	April 10, 1810
Mill stones, dressing.....	John Black.....	Helena, Ark.....	Aug. 10, 1844
Mortar, preparing for the manufac- ture of bricks, &c.....	Oran W. Seely.....	Sodus, N. Y.....	Mar. 5, 1839
Mortar, machine for making.....	Daniel Hunt.....	Sanford, Ct.....	Mar. 22, 1810
Mortar machine & mason's tender	Samuel Whitman.....	Danville, Wj.....	Mar. 11, 1835
Mortar machine, preparing or grinding apples.....	T. Streeter and J. S. Wilbert.....	Chili, N. Y.....	June 12, 1837

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Mortar, mixing.....	Andrew Kirkpatrick..	Urbana, Ohio.....	Nov. 12, 1881
Mortar, mixing.....	Everhart and Swimley	Washington, D. C..	June 20, 1885
Mortar, mixing, & hoisting brick.	Jesse Rinehart.....	Danville, Ill.....	June 6, 1835
Mortar, tub mill.....	James Parker.....	Gardiner, Me.....	Jan. 28, 1836
Moulding pottery.....	J. C. Mendall and B. B. Ricketts.....	Millsonville, Ky....	June 30, 1836
Moulds, for stone posts and fences	Edward Boston.....	Gloucester, N. J....	Oct. 14, 1815
Moulds, sugar, making.....	Antoine Carbonel....	Philadelphia, Pa....	April 29, 1842
Pans, baking and burning.....	Wm. Brutus.....	New York.....	Nov. 7, 1820
Pans, milk, manufacturing.....	Amos Miner.....	Camillus, N. Y....	July 20, 1825
Pans, milk, of stone ware.....	Sanford S. Perry.....	New York.....	Sept. 9, 1825
Pipes, of clay.....	John Bower.....	E. Bethlehem, Pa....	Dec. 1, 1826
Pipes, of clay.....	Thomas Wickersham	Newbury, Pa.....	May 13, 1828
Pipes, of clay, conduit.....	Samuel Bartlett.....	Hartford, Conn....	Oct. 1, 1805
Pipes, earthen or cement, for conveying water.....	Charles Stearns.....	Springfield, Mass...	May 8, 1839
Plaster Paris, breaking.....	Paul Geiger.....	Robeson, Pa.....	May 12, 1812
Pottery ware, manufacture of....	Joel Farnham.....	Stillwater, N. Y....	Oct. 25, 1845
Sifting sand and lime, &c.....	E. Blanc and B. H. Latrobe.....	New Orleans, La....	April 14, 1821
Slates, application to various uses.	William Sheldon, jr..	Springfield, Mass...	Feb. 28, 1811
Slates, manufacturing.....	Thomas Woodsend....	.....	Aug. 7, 1806
Slates, manufacturing.....	J. Madison, E. and P. S. Mattes.....	Easton, Pa.....	Dec. 22, 1826
Slates, manufacturing.....	Thomas Symington..	Baltimore, Md.....	Nov. 17, 1828
Slates, polishing and framing.....	John Coleman.....	Baltimore, Md.....	Dec. 31, 1813
Stone, cutting.....	J. and J. Sutton.....	Reading, N. Y.....	June 20, 1836
Stone, cutting and chiselling.....	Larmon Parke & Iram Brewster.....	Schoharie, N. Y....	Oct. 10, 1831
Stone, cutting and dressing.....	Mighill Nutting.....	Portland, Me.....	May 15, 1837
Stone, cutting and dressing.....	G. M. Alger and J. A. Alger.....	South Strafford, Vt.	Mar. 3, 1838
Stone, cutting and planing.....	A. Clark and C. H. Boynton.....	W. Stockbridge, Mass	June 20, 1836
Stone, cutting and dressing.....	Thomas J. Cornell....	Worcester, Mass....	Nov. 3, 1841
Stone cutters.....	Jacob Jenks.....	Roscoe, Ill.....	June 24, 1844
Stone, dressing.....	Clarke Miller, jr.....	Williamsport, Pa.,	Feb. 14, 1832
Stone, dressing.....	Nathan Jacobs.....	Newark, Ohio.....	Mar. 11, 1837
Stone, dressing.....	Theodore R. Timby..	Auburn, N. Y.....	April 23, 1842
Stone, dressing.....	Hammond Ward.....	Charlton, Mass....	April 10, 1844
Stone, dressing.....	John C. Dexter.....	Ionis, Mich.....	Mar. 12, 1845
Stone, dressing.....	Jacques Keller, ass'ee of Daniel Pfister....	Switzerland.....	April 10, 1845
Stone, dressing, drilling, & cutting	Heman Bourne.....	Salem, Mass.....	Aug. 3, 1837
Stone, facing.....	Daniel Bunnell.....	Xeni, Ohio.....	July 16, 1838
Stone, facing and dressing.....	David Hull and Jo. Critcherson.....	Portland, Me.....	May 8, 1837
Stone, hewing, drilling, & picking.	Linus Yale.....	Salisbury, N. Y....	Jan. 20, 1830
Stone, hewing and hammering...	Charles B. Reed.....	W. Bridgever, Mass	June 27, 1827
Stone, sawing mill for.....	David V. Ramselle....	Washington, Ky....	Feb. 8, 1840
Stone, sawing.....	John and S. Dwight..	Boston, Mass.....	June 17, 1818
Stone, sawing.....	Nathaniel Holmes....	Barnstable, Mass...	Jan. 24, 1828
Stone, sawing.....	Joseph L. Duller.....	Philadelphia, Pa....	May 22, 1835
Stone, sawing, polishing, & moulding.....	Simeon B. Withers..	Bloomfield, N. Y....	Nov. 3, 1813
Stone, saw mill.....	Wm. Palmer.....	New York.....	Dec. 31, 1802
Stone, saw mill.....	Daniel Bunnell.....	Xenia, Ohio.....	Oct. 27, 1846
Stone ware, burning without salt.	Sanford S. Perry.....	Troy, N. Y.....	Sept. 12, 1836
Tile, cutting clay for.....	Andrew W. Duty.....	South Carolina.....	May 8, 1780
Tile, and pan.....	Wm. Hawood.....	Richmond, Va.....	July 3, 1806
Tiles, clay, for aqueducts.....	James Ramsey.....	Burke, Vt.....	April 4, 1810
Tiles, clay, manufacturing.....	John H. Rowan and H. Wine.....	Fredenshtown, Pa..	May 10, 1828

* Antedated Sept. 3, 1837.

† Foreign patent dated Dec. 31, 1844.

CLASS No. XVI.

LEATHER.

**Including Tanning and Dressing, Manufacture of Boots,
Shoes, Saddlery, Harness, &c.**

LIST OF PATENTS.

CLASS XVI.—LEATHER, including Tanning and Dressing, Manufacture of Boots, Shoes, Saddlery, Harness, &c.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Bating hides and skins.....	Wm. Zollickoffer	Middleburg, Md ...	Feb. 3, 1838
Bating hides.....	Wm. Zollickoffer	Middleburg, Md ...	Aug. 18, 1842
Beaming.....	Jer. Ladd	New Hampshire....	July 17, 1801
Beaming.....	Allen Hill.....	Hillsdale, Mass....	May 16, 1805
Bench, perpetual, shoe.....	Samuel Haynes.....	Malden, Mass.....	Sept. 1, 1834
Bench, shoemakers'.....	Joel Soper.....	Windsor, Ct.	Aug. 12, 1815
Boarding machine, for softening hides.....	Eli Kendall.....	Ashby, Mass.....	June 19, 1835
Boots & booties, cutting the uppers	Jos. T. Buck.....	New Canaan, Ct....	Oct. 27, 1835
Boots, cork sole.....	Wm. L. McCauley....	Baltimore, Md.....	June 5, 1844
Boot crimps.....	Joseph Sanderson....	Cincinnati, Ohio....	June 7, 1839
Boot crimps.....	Horace Ferre.....	Springfield, Mass..	Sept. 25, 1839
Boot crimps.....	Bradford Rowe.....	Maryland, N. Y....	Dec. 17, 1843
Boot crimps.....	Eli P. Drake.....	Troy, N. Y.....	Nov. 15, 1843
Boot crimps.....	Josiah M. Read, ass'ee of Abraham Thayer, ass'ee of J. Copeland	Boston, Mass.....	Jan. 20, 1844
Boot crimps.....	Pelatah Stevens, jr....	Canton, Mass.....	July 15, 1844
Boot crimps.....	Cosman White.....	Galway, N. Y.....	Feb. 12, 1845
Boot crimps.....	Starr Fairchild, ass'ee of Reuben Fairchild.	Trumbull, Ct.....	May 10, 1845
Boot crimps.....	Cheney Snow & T. N. Sadler.....	Spencer, N. Y.....	May 21, 1845
Boots, crimping.....	Nathaniel L. Moore....	Smithfield, N. Y....	Feb. 4, 1812
Boots, crimping.....	Samuel Moorehouse....	Eastport, Me.....	June 19, 1827
Boots, crimping.....	Tyler Howe.....	Worcester, Mass....	June 11, 1829
Boots, crimping.....	Amasa Dunbar.....	Sharon, Mass.....	Feb. 19, 1830
Boots, crimping.....	Jonah Brewster.....	Worthington, Mass..	Mar. 23, 1830
Boots, crimping.....	Silas Witherby.....	Essex, Vt.....	May 12, 1832
Boots, crimping.....	Lewis Lucas.....	Barre, Vt.....	July 25, 1832
Boots, crimping.....	Dimon B. Barnum.....	New Fairfield, Ct....	Aug. 5, 1833
Boots, crimping, clamps for.....	E. G. Pomeroy.....	Newark, Ohio.....	Oct. 4, 1836
Boots, crimping, cramp for.....	Hubbard L. Pierce....	St. Johnsbury, Vt..	June 25, 1836
Boots, crimping fronts.....	Joseph H. Punchard....	Boston, Mass.....	May 8, 1830
Boots, crimping fronts.....	Henry S. Davis.....	Westernville, N. Y..	June 27, 1846
Boots, crimping leather for.....	Jesse Van Winkle.....	Rochester, N. Y....	April 17, 1837
Boots, crimping leather for.....	Moses S. Woodward....	Marshallton, Pa....	July 31, 1837
Boots, crimping legs.....	William Gerrish.....	Poland, Me.....	Feb. 10, 1836
Boots, crimping Suwarrow.....	Eleazer Lundy.....	New York.....	Aug. 14, 1810
Boots, crimping Suwarrow.....	Jer. Sibley.....	New York.....	April 25, 1811
Boots, cutting cassock.....	John Morgan.....	Philadelphia, Pa....	April 10, 1811
Boots, cutting the legs of.....	John Vernon.....	Baltimore, Md.....	Oct. 21, 1811
Boots, cutting.....	Thomas Cranage.....	Warren, Ohio.....	Mar. 13, 1844
Boots, cylindrical cleaner.....	Israel Pinkney.....	New York.....	April 16, 1817
Boot forms, bevelling.....	Elijah Holmes.....	Stoughton, Mass....	Aug. 12, 1840
Boot, gaiter, gum elastic gores...	John H. Dupont and Theodore Hyatt....	New York, N. Y....	Oct. 30, 1840
Boots, lasting.....	John Eells, jr.....	Unadilla, N. Y....	Mar. 25, 1825
Boot legs, turning.....	Joseph H. Sandford..	Hopewell, N. Y....	June 22, 1842
Boots, machine for blacking and cleaning.....	John Folsom.....	Hallowell, Me.....	April 14, 1835
Boots, machine for crimping.....	John Young.....	West Galway, N. Y..	Aug. 26, 1845

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Boots, machine for drawing.....	Lewis K. Dole & Nathaniel Pickard.....	Rowley, Mass.....	July 12, 1834
Boots, machine for turning boot legs.	S. C. Blodget & Henry Boynton.....	Rowley, Mass.....	Sept. 26, 1835
Boots, machine for turning boot legs.....	Thomas N. Saddler.....	Spencer, Mass.....	Nov. 8, 1836
Boots, making.....	James Turnbull.....	Philadelphia, Pa.....	June 24, 1843
Boots, manufacturing.....	Alden Burdick.....	Carroll, N. Y.....	Oct. 31, 1829
Boots, manufacturing, by the hinge or boot cramp.....	Nathan Ayer.....	St. Johnsbury, Vt.....	June 19, 1835
Boots, mode of lasting.....	David Harrington.....	German Flats, N. Y.....	Aug. 26, 1845
Boot patterns.....	Joseph Rider.....	Wooster, Ohio.....	June 2, 1845
Boot shank, elastic.....	Isaiah Gale.....	Natchez, Miss.....	July 11, 1844
Boots and shoes*.....	John Dick.....	Philadelphia, Pa.....	Nov. 4, 1842
Boots and shoes.....	Joshua S. Bowler.....	Lynn, Mass.....	Nov. 21, 1842
Boots and shoes, attached soles, by means of caoutchouc.....	Samuel D. Breed.....	Philadelphia, Pa.....	April 4, 1833
Boots and shoes, crimping.....	Ebenezer G. Pomeroy.....	Lancaster, Ohio.....	July 27, 1824
Boots and shoes, cutting.....	Samuel Marshall.....	Philadelphia, Pa.....	June 23, 1829
Boots and shoes, cutting.....	Jeremiah B. Keen.....	Bridgeton, N. J.....	June 21, 1839
Boots and shoes, cutting channels for seams.....	Jas. Cole.....	E. Bloomfield, N. Y.....	Nov. 26, 1830
Boots and shoes, cutting & forming	Joshua Hall.....	Fredericktown, Md.....	Dec. 15, 1815
Boots and shoes, cutting by rule.	Simeon Hart.....	Monkton, Vt.....	Mar. 3, 1831
Boots and shoes, gum elastic, attaching soles to.....	Wait Webster.....	New York.....	May 19, 1832
Boots and shoes, gum elastic, attaching soles to.....	Nathaniel Ruggles...	Bridgeport, Ct.....	Feb. 20, 1833
Boots and shoes, from India rubber leather.....	Edwin M. Chaffee.....	Roxbury, Mass.....	May 17, 1834
Boots and shoes, heels of.....	Samuel Warner.....	Lowell, Vt.....	July 1, 1840
	J. Hodgkin.....	Westfield, Vt.....	
	William E. Traver.....	Watervliet, N. Y.....	
	William Lewis & Wm. H. Lewis.....	New York.....	
Boots and shoes, heel plates for..	Silas Hart.....	New Haven, N. Y.....	Oct. 31, 1839
Boots and shoes, lasting.....	Peter Gordon.....	Philadelphia, Pa.....	June 20, 1846
Boots and shoes, manufacturing..	Dean Howard.....	Massachusetts.....	Aug. 10, 1791
Boots and shoes, manufacturing..	Jno. Bedford.....	Massachusetts.....	April 10, 1800
Boots and shoes, manufacturing..	Wm. Montgomery.....	Philadelphia, Pa.....	July 16, 1806
Boots and shoes, manufacturing..	Eli Barnum.....	Philadelphia, Pa.....	Feb. 11, 1807
Boots and shoes, manufacturing..	Samuel Chamberlain.....	Massachusetts.....	Jan. 9, 1808
Boots and shoes, manufacturing..	Sam'l B. Hitchcock & John Bement.....	Boston, Mass.....	Nov. 21, 1808
Boots and shoes, manufacturing..	Elijah Thayer.....	Homer, N. Y.....	July 30, 1811
Boots and shoes, manufacturing..	Daniel Peck.....	Leicester, Mass.....	Mar. 14, 1812
Boots and shoes, manufacturing..	Ebenezer Martin.....	New York.....	Aug. 14, 1821
Boots and shoes, manufacturing..	Jno. Trask.....	Salem, N. J.....	Jan. 12, 1824
Boots and shoes, manufacturing..	Elijah Thayer.....	Haddfield, Mass.....	April 5, 1826
Boots and shoes, manufacturing..	Moses Renneck.....	Leicester, Mass.....	June 9, 1826
Boots and shoes, manufacturing..	Caleb A. Ore.....	E. Marlborough, Pa.....	Dec. 14, 1830
Boots and shoes, manufacturing..	Sam'l Gerhard & Jos. Vanneman.....	Philadelphia, Pa.....	May 5, 1831
Boots and shoes, manufacturing..	Ansel Thayer.....	Camden, N. J.....	July 26, 1833
Boots and shoes, manufacturing, elastic.....	Pierre Azam.....	Braintree, Mass.....	April 24, 1841
Boots and shoes, manufacturing, elastic hair soles.....	Wm. Francis.....	Baltimore, Md.....	Sept. 24, 1816
Boots and shoes, manufacturing, furred.....	Samuel Eells.....	Boston, Mass.....	June 23, 1812
Boots and shoes, manufacturing, iron bound.....	Ephraim Twombly.....	Connecticut.....	Feb. 24, 1816
Boots and shoes, manufacturing, mathematical.	Wm. G. Crease and J. Morgan.....	Norway, Mass.....	Aug. 28, 1812
		Philadelphia, Pa.....	July 20, 1812

* Antedated Oct. 15, 1842.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Boots and shoes, manufacturing, metallic bottoms.....	Samuel Millikin.....	Lexington, Mass...	Feb. 10, 1807
Boots and shoes, manufacturing, with nails and pegs.....	Nicholson Millis.....	New York.....	Mar. 21, 1831
Boots and shoes, manufacturing, from skins with hair on.	Stephen H. Brown, E. Brown, and Henry Whitman.....	Norfolk, Ct.....	April 16, 1833
Boots and shoes, manufacturing, water proof.....	Aaron Dana.....	Boston, Mass.....	Dec. 31, 1821
Boots and shoes, manufacturing, water proof.....	Arnold Buffum.....	Smithfield, R. I.....	Dec. 28, 1822
Boots and shoes, manufacturing, with wooden pegs and screws..	Robert U. Richards ..	Norfolk, Ct.....	May 23, 1812
Boots and shoes, mode of holding	Samuel Nourse.....	Danvers, Mass.....	Dec. 8, 1827
Boots and shoes, nailing on the soles.....	Jno. Bedford.....	Philadelphia, Pa....	June 2, 1818
Boots and shoes, pegged.....	Samuel Preston.....	Danvers, Mass.....	Mar. 8, 1833
Boots and shoes, pegging.....	Ava Woodruff.....	Westford, Mass....	Sept. 6, 1833
Boots and shoes, pegging.....	Nathan A. Fisher....	Westborough, Mass.	April 3, 1834
Boots and shoes, pegging, machine for.....	Nathan Leonard.....	Merrimack, N. H. ..	June 11, 1829
Boots and shoes, pegging, machine for.....	William B. Randall ..	Fayette, Me.....	Aug. 6, 1832
Boots and shoes, pegging, machine for.....	Frederick Gray.....	Rowley, Mass.....	April 6, 1832
Boots, shoes, socks, &c., water proof.....	William Atkinson....	Tewkesbury, Mass.	Mar. 7, 1834
Boot and shoe soles, cutting.....	Jonathan Hill.....	Billerica, Mass....	Mar. 31, 1836
Boots and shoes, soles of.....	Rob't W. Ruggles, as'e of Walter Hunt.....	New York.....	Aug. 17, 1833
Boots and shoes, soles of.....	Wm. H. Elsegood....	Philadelphia, Pa....	Dec. 20, 1843
Boots and shoes, soling and heel- ing with wooden or metal pegs.	Wales Tileston.....	Charlemont, Mass..	Aug. 18, 1831
Boots and shoes, taps for soles...	Stillman Knowlson...	Athol, Mass.....	Oct. 25, 1832
Boots and shoes, tassels and cords for.....	Alfred Janes.....	Hartford, Ct.....	Mar. 1, 1813
Boot and shoe trees*	Jonathan Russell.....	Philadelphia, Pa....	July 7, 1846
Boots and shoes, water proof...	Patrick G. Nagle....	Philadelphia, Pa....	Dec. 14, 1825
Boots and shoes, water proof...	Samuel Eells, 2d.....	Middletown, Ct....	April 23, 1830
Boots and shoes, water proof...	David Clarkson.....	New York.....	Dec. 2, 1835
Boots and shoes, water proof, per- petual polished.	J. Rynex, J. Haskins, & Samuel Knower..	Boston, Mass.....	Sept. 23, 1829
Boots, for stages.....	Peter Laporte.....	Augusta co., Va....	July 28, 1828
Boots, treeing.....	Elias Hall, jr.....	Spencer, Mass.....	May 29, 1841
Boot trees.....	Henry B. Miller.....	Mayville, N. Y....	Aug. 25, 1828
Boot trees.....	Joshua Ayars.....	Brookfield, N. Y..	Nov. 27, 1828
Boot trees.....	M. Matthews.....	Wayne, Ohio.....	Feb. 25, 1836
Boot trees.....	David Hastings.....	Deerfield, Mass....	Dec. 15, 1837
Boot trees, screw.....	George Nicol.....	Madison, Va.....	Sept. 8, 1826
Boots, tucking machine.....	Sherburne C. Blodget.	Rowley, Mass.....	June 11, 1836
Boots, turning.....	Peletiah Stevens.....	Stoughton, Mass....	Mar. 4, 1836
Buckles for harness.....	Kasson Frazer.....	Manlius, N. Y....	Jan. 16, 1845
Buckles for harness.....	Kasson Frazer.....	Fayetteville, N. Y.	Mar. 26, 1845
Buttons, forming worked, on the head, handles, &c., of whips†	Robert S. Brown.....	Philadelphia, Pa....	Feb. 21, 1842
Cleansing leather.....	Robert Emes.....	Boston, Mass.....	Nov. 21, 1831
Collars, horse, constructing.....	Nathan Post.....	Madrid, N. Y.....	July 22, 1843
Coloring and finishing leather...	Harmon Hibbard.....	Attica, N. Y.....	Dec. 15, 1837
Crimps for collar-pad.....	Joseph S. Barkdull...	Ballston, N. Y....	July 13, 1844
Crimping leather.....	Lucius Upham.....	Putney, Vt.....	Jan. 9, 1838
Crimping leather.....	Collins H. Jaquith...	Keene, N. H.....	Mar. 21, 1839
Crimping leather†	Joseph Adams.....	Fairhaven, Vt.....	Mar. 26, 1838
Crimping leather.....	Nat. aniel Woodbury.	Calais, Maine.....	Aug. 16, 1838
Crimping leather.....	George and Maj. Algar	Greenport, N. Y....	Nov. 25, 1838

* Antedated July 4, 1846.

† Additional improvement, April 1, 1842.

‡ Antedated September 26, 1837.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Crimping leather, clamps for.....	Josiah M. Read.....	Boston, Mass.....	Mar. 16, 1841
Crimping leather, machine, regulat- ing the jaws.....	John Goodwin, jr.....	Sterling, Mass.....	May 30, 1839
Crimping tool.....	William Taylor.....	Berlin, N. Y.....	Oct. 3, 1846
Curriers' beam, constructing the face of.....	Ichabod Lindsey.....	Charlestown, Mass.....	Jan. 27, 1841
Curriers' knife.....	Seth Parsons.....	Parsonfield, Mass.....	Oct. 25, 1810
Curriers' knife.....	Daniel Tomlinson.....	Brookfield, Conn.....	July 6, 1820
Curriers' knife.....	James Bachelder.....	Lancaster, N. H.....	Nov. 3, 1825
Curriers' knife.....	Freeman Palmer.....	Littleton, N. H.....	Mar. 17, 1826
Curriers' knife.....	Isaac H. Harrington.....	Albany, N. Y.....	June 26, 1828
Curriers' knife.....	Thomas C. Burr.....	Clark county, Ky.....	Jan. 28, 1833
Curriers' knife.....	J. Gleim and J. Herd.....	Urbanna, Ohio.....	Dec. 16, 1833
Curriers' knife, constructing and grinding.....	Samuel Brook.....	New York.....	Nov. 13, 1826
Curriers' knife, and double trim- mer.....	Luther Townsend.....	Farmington, Maine.....	Jan. 16, 1835
Curriers' knife, sharpening.....	James Bachelder.....	Lancaster, N. H.....	Nov. 9, 1824
Curriers' knife, tempering.....	Daniel S. Delano.....	Cornwall, Conn.....	April 6, 1833
Curriers' and tanners' knife, shar- pening.....	Warren Eggleston.....	Troy, N. Y.....	Jan. 8, 1839
Currying and finishing leather.....	Samuel Parker.....	BillERICA, Mass.....	July 9, 1808
Currying and finishing leather.....	Samuel Parker.....	BillERICA, Mass.....	April 26, 1809
Cutting leather.....	George P. Mitchell.....	Burlington, N. J.....	May 15, 1826
Cutting leather.....	Levi N. Leland.....	Grafton, Mass.....	Sept. 28, 1837
Cutting leather.....	Joseph S. Bishop.....	Wayne, Maine.....	June 29, 1833
Cutting leather into soles.....	Elias F. Ingalls.....	Haverhill, Mass.....	April 11, 1842
Cutting leather at one operation.....	George Domett.....	Boston, Mass.....	July 20, 1831
Cutting leather, punching.....	Ira Genung.....	Newark, N. J.....	July 30, 1831
Cutting sole leather, knife or knives.....	Luke Marble.....	Henrietta, N. Y.....	Mar. 28, 1828
Dying and polishing leather.....	Lemuel Hedge.....	Windsor, Vt.....	July 22, 1819
Dying and polishing leather.....	Samuel Couillard.....	Boston, Mass.....	June 27, 1827
Finishing leather.....	James Burr.....	Johnstown, N. Y.....	Nov. 24, 1820
Finishing leather.....	Cushman Bassett.....	Boston, Mass.....	Mar. 25, 1835
Glazed leather.....	E. G. Adams.....	Decatur, Ga.....	June 30, 1836
Handling leather.....	William G. Waterman.....	Sullivan, N. Y.....	Sept. 16, 1834
Harness, blinds of horse bridles.....	John G. Tibbets.....	New York.....	Oct. 9, 1841
Harness, breast-plate for horses.....	Abel Post.....	Henrietta, N. Y.....	April 8, 1840
Harness, bridles.....	Rob. Smether.....	Orange county, Va.....	Dec. 10, 1812
Harness, bridles.....	Peter Laporte.....	Richmond, Va.....	Aug. 15, 1812
Harness, bridles.....	Daniel H. Read.....	New York.....	Oct. 24, 1826
Harness, bridles.....	John C. Smith.....	Brookhaven, N. Y.....	Mar. 23, 1842
Harness, bridles.....	John C. Smith.....	Brookhaven, N. Y.....	Sept. 17, 1842
Harness, bridles, bits for.....	Henry Pierce.....	Sharon, Conn.....	Mar. 15, 1834
Harness, bridle bit for horses.....	Dan Shaw Balch.....	Bradford, Vt.....	Aug. 23, 1839
Harness, bridles, check and brace.....	William F. Pendleton.....	King & Queen co. Va.....	Feb. 20, 1833
Harness, carriage.....	Benjamin Merrick.....	Rutland county, Vt.....	April 21, 1809
Harness, carriage, and saddlery.....	Benj. Foster, Daniel Washburn, Northrop Rockwell, and James O. Walker.....	Castleton, Vt.....	Aug. 16, 1810
Harness and carriage, safety.....	Edwin Eastlack.....	Greenwich, N. J.....	Jan. 10, 1840
Harness, check-hooks for.....	Abel B. Buell.....	Westmoreland, N. Y.....	Mar. 13, 1844
Harness, collar for.....	F. C. Curtis.....	Columbia, S. C.....	Aug. 4, 1845
Harness, collars, blocking hame.....	Nathan Post.....	Norfolk, N. Y.....	July 24, 1834
Harness, collars, blocking and stretching.....	Melvin Eddy.....	Adams, N. Y.....	April 22, 1835
Harness, coupling straps as a sub- stitute for a buckle.....	Lyman and James H. Beebe.....	Penfield, N. Y.....	Mar. 10, 1843
Harnesses, edging and preparing leather for.....	Samuel Wilson.....	Dansville, N. Y.....	May 9, 1846
Harness, fastenings.....	Warner Hayden.....	New Milford, Pa.....	Jan. 21, 1837
Harness, hames, carriage.....	Herrick Aiken.....	Brighton, Mass.....	Mar. 12, 1823
Harness, hames, fastening, horse.....	Timothy Taylor.....	Loudoun county, Va.....	Mar. 11, 1835

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Harness, hames, for.....	Kasson Frazer.....	Fayetteville, N. Y..	Sept. 26, 1846
Harness, hames, wood, supercede collars.....	Sereno Norton.....	East Bloomfield, N. Y.	June 12, 1836
Harness, horse blinds.....	Seth Boyden.....	Newark, N. J.....	April 10, 1824
Harness, horse collars.....	William Hottenstein.....	Pennsylvania.....	April 10, 1800
Harness, horse collars.....	Caleb Angevine.....	New York.....	Oct. 27, 1835
Harness, horse collars.....	Henry C. Call.....	Sterling, Conn.....	Nov. 14, 1835
Harness, horse collars.....	Horace Holton.....	Rochester, N. Y.....	May 16, 1833
Harness, horse collars.....	Ebenezer Whitney....	Chenango, N. Y.....	June 4, 1834
Harness, horse collars.....	John Hopkinson.....	Warren county, Ohio	Jan. 23, 1836
Harness, horse collars, cutting tops of.....	Timothy Deming....	East Hartford, Conn.	Mar. 6, 1835
Harness, horse collars, forming..	G. Warner & Robinson	Canajoharie, N. Y..	June 22, 1836
Harness, horse collars, machine..	Dyer Cleveland.....	Owego, N. Y.....	Sept. 13, 1834
Harness, horse collars, cutting the leather of.....	Thomas Parkinson...	Sparta, N. Y.....	July 17, 1841
Harness, horse collars, stretching	Henry Barton.....	West Carlisle, Ohio	July 9, 1838
Harness, horse collars, stretching	James B. Osborn.....	Reddington, N. J....	Jan. 30, 1841
Harness, horse-hames.*.....	Nathan Post.....	Madrid, N. Y.....	June 15, 1844
Harness, horse-hames.....	Joseph K. Slater and Sylvanus G. Pratt...	Boston, Mass.....	Sept. 20, 1844
Harness, for horses in shafts....	Robert Beale.....	Washington, D. C....	June 15, 1837
Harness, nets, fly, for horses†...	Henry Korn.....	Philadelphia, Pa....	Sept. 12, 1829
Harness, nets, fly, for horses....	Peter Minster.....	Philadelphia, Pa....	July 20, 1831
Harness, nets, fly, for horses....	William H. Horstman	Philadelphia, Pa....	July 28, 1831
Harness, nets, fly, for horses†...	Henry Korn.....	Philadelphia, Pa....	Dec. 8, 1831
Harness, nets, fly, for horses....	Henry Korn.....	Philadelphia, Pa....	June 22, 1832
Harness, nets, fly, for horses....	Henry Korn.....	Philadelphia, Pa....	July 2, 1836
Harness, pad, brace, or stiffener..	Silas Lamson.....	Sterling, Mass.....	Jan. 5, 1833
Harness, pad, elastic, water proof	A. Deitz.....	Albany, N. Y.....	Oct. 14, 1836
Harness, riveting.....	William Dukehart....	Baltimore, Md.....	Mar. 30, 1836
Harness saddles.....	John T. Dennison....	Lynde, N. Y.....	Nov. 20, 1846
Harness, safety.....	George Rogers.....	Baltimore, Md.....	July 22, 1833
Harness, stuffing collars for.....	Thomas Wiles.....	Somerset, Ohio.....	Mar. 21, 1845
Harness, stuffing and stretching collars.....	Wade Haworth.....	Dayton, Ohio.....	May 7, 1845
Harness, trace and bar, elastic, by springs.....	Benjamin Giddins....	Baltimore, Md.....	Dec. 10, 1808
Harness, trace and swingletrees, spiral springs.....	John Sherfy.....	Uniontown, Md....	July 22, 1833
Harness trimmings and carriage ornaments.....	William S. Robinson.	Taunton, Mass.....	Sept. 22, 1829
Hats of leather, skins, &c., machinery for forming.....	Randal Fish.....	New York.....	Oct. 12, 1844
Hides, apparatus for handling...	William Brown.....	Thompson, N. Y....	Feb. 9, 1844
Hides, breaking.....	Wm. M. D. Hasbrouck and Jac. Diefenback.	Bloomsbury, Pa....	Feb. 8, 1819
Hides, breaking.....	Hezekiah S. Clarke...	Randolph co., N. C.	Dec. 22, 1826
Hides, breaking, hairing.....	Nathaniel Kirk and Samuel C. Clarke.....	St. Clairsville, Ohio	July 18, 1812
Hides, breaking and fleshing....	Anthony Smith.....	Cumberland Valley, Pa.....	Aug. 26, 1846
Hides, breaking, hairing, fleshing.	T. E. Barker and L. S. Fordham.....	Hudson, N. Y.....	Oct. 15, 1812
Hides, breaking and softening...	Eli Kendall.....	Newton, Mass.....	June 10, 1837
Hides, constructing rollers for pressing.....	Lewis R. Palmer.....	Maryland, N. Y....	Dec. 31, 1839
Hides, dressing.....	George Welty.....	West Newton, Pa....	June 13, 1846
Hides, handling, reel for.....	William Brown.....	Frankford, Pa.....	April 17, 1828
Hides, protecting against moths..	Samuel Storm.....	New York.....	Feb. 17, 1827
Hides, raw and leather, cutting into strips for the manufacture of ropes.	Philip B. Holmes and William Pedrick.	Charlestown, Mass.	Jan. 9, 1841

* Additional improvement, July 14, 1846.

† Reissued, April 19, 1834.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Hides, raw, machine for cutting..	William Marshall and J. B. Thursby.....	Brooklyn, N. Y.....	Sept. 4, 1844.
Hides and skins, handling in tanning.	Augustus H. Bethermann.....	New York, N. Y.....	Nov. 14, 1844.
Hides, scraping*.....	Reuben Shailer.....	Haddam, Conn.....	June 19, 1837
Hides, softening.....	Willis Berry.....	New Sharon, Maine.....	Mar. 6, 1833
Hides, softening.....	Isaac Robinson.....	Baltimore, Md.....	Mar. 18, 1834
Hides, softening, breaking.....	William Edwards.....	Masonville, N. Y.....	Feb. 13, 1833
Hides, softening, dry.....	Benjamin Aylsworth.....	Northampton, Mass.....	Dec. 30, 1812
Hides, softening, and distending.	Daniel Krauser.....	Reading, Pa.....	Aug. 18, 1826
Hides, softening, fleshing, and working, dry and slaughtered.	Abner McMiller.....	Bedford, N. H.....	Feb. 4, 1833
Hides, unhairing.....	James Banks.....	Dixmont, Maine.....	June 30, 1836
Hooks, by which bits may be attached to bridles.	Asahel A. Hotchkiss and Eben. Garnsay.	Sharon, Conn.....	Jan. 23, 1834
Hose, or leather tubes.—See Hose.	Class 11.		
Leather, dicing and polishing....	Hufus and Henry Brackett.....	Boston and Woburn, Mass.....	Mar. 15, 1845
Leather, extending and stretching.	William Kumbel.....	New York, N. Y.....	April 11, 1846
Leather, fair, manufacturing....	John L. Turner.....	Philadelphia, Pa.....	July 15, 1840
Leather, hats, manufacturing of..	James S. and William Wilbert.....	Eden, N. Y.....	Sept. 4, 1841
Leather, India rubber hats, machinery for making.....	Sewall Gleason.....	New York, N. Y.....	Nov. 24, 1843
Leather, making.....	Robert Downey.....	New Albany, Ia.....	June 15, 1844
Leather, manufacturing.....	A. Hickman and E. L. Davenport.....	Abington, Va.....	Aug. 1, 1838
Leather, pricking†.....	Samuel Sheldon.....	Cincinnati, Ohio.....	Oct. 10, 1840
Leather, pricking†.....	Samuel Sheldon.....	Cincinnati, Ohio.....	Oct. 10, 1840
Leather, rollers.....	John Gardner.....	Petersburg, Pa.....	April 25, 1843
Leather, rolling.....	Thos. J. Patterson, assignee of Wm. Coburn.....	Mount Joy, Pa.....	Oct. 31, 1839
Leather splitting.....	Horace White.....	Binghampton, N. Y.....	Aug. 2, 1839
Leather, splitting.....	Alpha Richardson.....	Boston, Mass.....	Feb. 9, 1841
Leather, splitting.....	Alpha Richardson.....	Boston, Mass.....	Aug. 17, 1844
Leather, stitching.....	Samuel Sheldon.....	Cincinnati, Ohio.....	Aug. 3, 1839
Leather, whitening.....	James C. Booth.....	Philadelphia, Pa.....	Dec. 5, 1840
Mail bags.....	Abm. Pennock and J. Sellers.....	Philadelphia, Pa.....	July 6, 1818
Mail bags.....	Peter Laporte.....	Richmond, Va.....	May 5, 1824
Mail bags, bolt for.....	Ira Atkins.....	Hanover, N. H.....	Feb. 17, 1836
Mail bags, India rubber.— See	Class 22.		
Mail bags, mouth piece.....	James Sellers & Abraham L. Pennock...	Philadelphia, Pa.....	June 12, 1840
Mail bag, way||.....	Henry Johnson.....	Washington, D. C.....	April 25, 1846
Measuring and cutting leather...	Thomas Howe.....	Worcester, Mass.....	April 18, 1829
Morocco, polishing.....	Abel Bayard.....	South Reading, Mass.....	Dec. 29, 1838
Morocco, polishing and dying...	Moses Hall.....	Charlestown, Mass.....	Dec. 31, 1817
Morocco, polishing and dicing...	Robert Eames.....	Boston, Mass.....	Nov. 21, 1831
Morocco, polishing and graining.	Jacob Perkins.....	Boston, Mass.....	June 26, 1809
Morocco, polishing and graining.	Robert Eames.....	Boston, Mass.....	April 20, 1831
Preparing leather, belt and picker	John J. Travis.....	Franklin, Ct.....	Oct. 22, 1828
Pricking leather, for cards.....	Pliny Earle.....	Massachusetts.....	Dec. 6, 1803
Pricking leather.....	Robert U. Richards & Mills Richards.....	Norfolk, Ct.....	April 24, 1810
Pricking leather, for harness....	Joseph Briggs, Luther C. Carner, and John C. Carner.....	Paineville, Ohio.....	Mar. 26, 1838
Punching holes in raw hides....	William Angell.....	Providence, R. I.....	July 19, 1832
Punches, for straps.....	Charles Angell.....	Philadelphia, Pa.....	July 15, 1829
Roller, for preparing leather...	William Edwards.....	Northampton, Mass.....	Oct. 19, 1812
Rolling leather.....	Harvey Paign.....	Alexander, N. Y.....	Dec. 23, 1838

* Additional improvement, February 9, 1841.

† Antedated September 21, 1840.

‡ Antedated September 30, 1840.

|| Antedated December 9, 1845.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Rolling leather.....	J. M. McLaughlin and H. Hill.....	Sunderland, Vt.....	April 28, 1836
Rolling and shaving leather.....	Thomas Chase.....	New York city.....	Sept. 12, 1838
Saddles.....	Thomas Stickney.....	Massachusetts.....	Nov. 16, 1797
Saddles.....	Elisha Walker.....	Aurora, N. Y.....	Nov. 16, 1820
Saddles.....	Peter Dixon.....	Philadelphia, Pa.....	April 25, 1821
Saddles.....	John J. Morris.....	New York.....	Aug. 28, 1821
Saddles.....	Thos. G. Prettyman.....	Alexandria, D. C.....	Sept. 30, 1825
Saddles.....	Lacy White.....	New York.....	Sept. 30, 1825
Saddles.....	William H. Collins.....	Cincinnati, Ohio.....	May 27, 1826
Saddles.....	Alexander Marshall.....	Pikeland t'nship, Pa.....	April 30, 1829
Saddles.....	Levi Sherman.....	Bridgeport, Ct.....	Jan. 18, 1831
Saddles.....	Benjamin Craft.....	Reading, Pa.....	June 20, 1836
Saddles.....	Otho W. S. Callihan.....	Staunton, Va.....	July 1, 1836
Saddles.....	David Irvin.....	Madison, Wis. Ter.....	April 11, 1842
Saddles.....	Foster D. Ward.....	Ballbrook, Ohio.....	April 23, 1842
Saddles.....	Orren McCluer.....	Fredonia, N. Y.....	Mar. 25, 1840
Saddles.....	Benjamin Suits.....	Chittenango, N. Y.....	Aug. 9, 1845
Saddles, construction of.....	Samuel Ringgold.....	Fort McHenry, Md.....	Oct. 7, 1844
Saddles, and collars.....	Ebenezer Hale.....	New York, N. Y.....	Jan. 20, 1836
Saddles, double side.....	Hugh M. Rose.....	Lexington, Ky.....	June 19, 1824
Saddles, bow and worm, spring for	Jonathan Keedy.....	Russellville, Ky.....	Aug. 18, 1837
Saddles, elastic.....	William McCormick.....	Bath county, Ky.....	June 20, 1836
Saddles, elastic seat.....	William Harper.....	Nashville, Tenn.....	April 2, 1819
Saddles, elastic seat.....	Peter H. Martin.....	Nashville, Tenn.....	Feb. 23, 1820
Saddles, elastic seat.....	Bushrod Smith.....	Romney, Va.....	Aug. 24, 1833
Saddles, ladies'.....	M. Jenkins.....	Attica, N. Y.....	July 1, 1836
Saddles, leather tree.....	Matthias Haldeman.....	Trapp, Pa.....	Oct. 10, 1829
Saddles, for removing the sick.....	Hezekiah L. Thistle.....	New Orleans.....	Jan. 21, 1837
Saddles, riding.....	Alonzo R. Dinsmoor.....	Goffstown, N. H.....	Oct. 25, 1834
Saddles, riding, of gum elastic webbing.....	A. L. Van Horn.....	Philadelphia, Pa.....	June 26, 1835
Saddles, seat, spring.....	Marshal Bayliss and Wm. Brannon.....	Fredericksburg, Va.....	May 16, 1835
Saddles, side.....	Olney Briggs.....	Schoharie, N. Y.....	Dec. 3, 1834
Saddles, side.....	E. Bridewell.....	Bardstown, Ky.....	Nov. 26, 1836
Saddles, spring.....	Charles Klasson.....	Baltimore, Md.....	May 22, 1816
Saddles, spring.....	Samuel M. Leaming.....	Lexington, Ky.....	July 6, 1818
Saddles, spring.....	Nathan W. Conklin.....	Jamaica, N. Y.....	Mar. 27, 1824
Saddles, spring.....	Thomas Harvey.....	Middletown, Del.....	Jan. 24, 1828
Saddles, spring.....	Joel Woodward.....	Marshalltown, Pa.....	Oct. 6, 1835
Saddles, spring.....	Adam Hickman.....	Abingdon, Va.....	Nov. 23, 1835
Saddles, spring.....	Charles Bates.....	Staunton, Va.....	Nov. 26, 1835
Saddles, spring.....	Peter Crim.....	Waynestown, Pa.....	April 28, 1836
Saddles, spring.....	William Duchman.....	Morgantown, Pa.....	Aug. 31, 1836
Saddles, spring.....	John G. Manlove.....	Bainbridge, Ohio.....	Mar. 25, 1837
Saddles, spring.....	Henry Sheets.....	Staunton, Va.....	Mar. 30, 1837
Saddles, spring.....	Moses Baldwin.....	Cincinnati, Ohio.....	April 29, 1837
Saddles, spring.....	Harmon C. Fisher.....	Warwick, R. I.....	Nov. 25, 1837
Saddles, spring.....	John D. Payne.....	Warm Springs, Va.....	Nov. 25, 1837
Saddles, spring.....	Thomas Mardock.....	Liberty, Ind.....	Aug. 28, 1841
Saddles, spring.....	Abraham Freed.....	Marietta, Pa.....	June 11, 1842
Saddles, spring.....	Robert Spencer.....	New York, N. Y.....	Nov. 24, 1843
Saddle springs.....	John F. Lehr.....	Huntsville, Ala.....	July 5, 1845
Saddle springs.....	Robert Caldwell.....	Montevallo, Ala.....	May 24, 1845
Saddles, spring seat, elastic.....	Charles E. King.....	Mount Pleasant, O.....	Feb. 21, 1840
Saddles, spring, riding.....	Richard Harrison.....	New York.....	Feb. 11, 1834
Saddles, spring seat, riding.....	J. G. Palmer, Harvey Beard, and Anthony Beard.....	Greenville, Va.....	June 12, 1835
Saddles, spring seat, riding.....	Robert Wilson.....	Milton, Pa.....	Mar. 11, 1837
Saddles, spring tree.....	David C. Mosely.....	Boston, Mass.....	April 25, 1810
Saddles, spring tree.....	Joseph Dinwiddie and Wm. Dinwiddie.....	Concord, Va.....	Aug. 8, 1833

INVENTIONS OR DISCOVERIES.	PATENTREES.	RESIDENCE.	WHEN ISSUED.
Saddles, steel spring worm.....	George Pritchard....	Clarksburg, Va.....	May 3, 1832
Saddles, trees.....	Chauncey Stiles, jr.....	Philadelphia, Pa.....	June 28, 1814
Saddles, trees.....	John Bryan.....	Lexington, Ky.....	Oct. 24, 1815
Saddles, trees.....	R. and E. Fairchild.....	Fairfield, Ct.....	Mar. 6, 1822
Saddles, trees.....	Anthony Null.....	Philadelphia, Pa.....	Aug. 29, 1822
Saddles, trees.....	Chris. Kurtz.....	Lancaster, Pa.....	May 28, 1823
Saddles, trees.....	George Wilkes.....	Fredonia, Ind.....	Nov. 22, 1826
Saddles, trees.....	Andrew R. McBride.....	Williamson co., Ten.....	Feb. 5, 1836
Saddles, trees.....	William Kelly.....	New Columbus, Pa.....	May 30, 1837
Saddles, trees, harness.....	Philo Washburn.....	Taunton, Mass.....	Mar. 8, 1832
Saddles, trees, ladies'.....	John M. Bouton.....	Newark, N. J.....	Aug. 17, 1835
Saddles, trees, machine for making	Reuben Fairchild and Eben. Fairchild.....	Fairfield, Ct.....	June 1, 1810
Saddles, trees, springs.....	Nathan Mixer.....	Keene, N. H.....	May 28, 1818
Saddles, trees, and spring girth..	Peter Harry.....	Harrisonburg, Va.....	Feb. 1, 1823
Saddles, without trees.....	Peter Dixon.....	Philadelphia, Pa.....	July 16, 1819
Saddlebag.....	Jos. H. Latourandaia.....	Flint Hill, Va.....	June 7, 1834
Saddlebag, fastenings.....	Alvin North.....	North Britain, Ct.....	Dec. 29, 1837
Sewing machine.....	George H. Corliss.....	Greenwich, N. Y.....	Dec. 27, 1843
Sewing machine, sewing with the running stitch.....	James Rodgers.....	New York.....	July 22, 1844
Sewing leather, clamp for.....	Joseph Burrington.....	Burke, Vt.....	May 1, 1834
Sewing leather, machine, &c....	Henry Lye.....	Philadelphia, Pa.....	Mar. 10, 1826
Sewing and stitching all kinds of straight seams.....	J. J. Greenough.....	Washington, D. C.....	Feb. 21, 1842
Shaving leather.....	Frederick Woodward.....	New Lisbon, N. Y.....	July 27, 1812
Shaving leather.....	J. P. Houston and O. P. Bachelder.....	Bedford, N. H.....	April 11, 1825
Shaving leather.....	James Reilly.....	Waynesborough, Pa.....	Feb. 28, 1833
Shaving leather.....	Herkimer Johnson.....	Brooklyn, Ct.....	June 16, 1836
Shaving leather, and splitting.....	Martin Fuller.....	Royalton, Vt.....	July 29, 1808
Shaving leather, and splitting.....	Seth Boyden.....	Foxborough, Mass.....	Jan. 7, 1809
Shaving leather, and splitting.....	Samuel Parker.....	Billerica, Mass.....	April 5, 1813
Shaving leather, and splitting skins	Philip White.....	Worcester, Mass.....	Nov. 1, 1810
Shoes, cutting.....	Benjamin Miller.....	Philadelphia, Pa.....	May 9, 1814
Shoes, cutting out.....	Charles Weston.....	Salem, Mass.....	May 27, 1834
Shoe knife.....	Ira Hatch.....	Essex, Vt.....	Aug. 15, 1833
Shoe making machine.....	J. Hall.....	N. Bridgewater Mass.....	May 6, 1836
Shoe, over.....	Daniel H. Bond.....	Canterbury, Ct.....	June 30, 1836
Shoes, over.....	Daniel Hodgman.....	New York, N. Y.....	Mar. 23, 1842
Shoes, over.....	Andrew Vetter.....	Philadelphia, Pa.....	May 2, 1846
Shoemaker's pairing knife.....	Isaac S. Pendergast.....	Barnstead, N. H.....	July 16, 1841
Shoemaker's workstand.....	Wm. & Nathan Kelly.....	Littleton, Mass.....	Oct. 13, 1820
Shoe pattern, perpetual.....	Samuel Haynes.....	Malden, Mass.....	Oct. 16, 1834
Shoes, socks.....	S. Norris and J. C. Wood.....	Philadelphia, Pa.....	Jan. 30, 1822
Shoes, water proof.....	Ernst G. Augustin.....	New York.....	July 6, 1835
Shoemaker, the.....	Gideon Drake.....	Windsor, Ct.....	Mar. 14, 1816
Shoemakers, clamp for.....	Thomas R. Hoyt.....	Goffstown, N. H.....	Dec. 6, 1817
Shoemakers, clamp for.....	Richard Emans.....	Mansfield, N. J.....	Oct. 6, 1837
Shoulder-irons, shoemakers'.....	James W. Newberry.....	Kensington, Pa.....	Feb. 20, 1845
Silvering and gilding leather.....	Levi Kenton.....	Philadelphia, Pa.....	June 21, 1830
Skins, deer, dressing.....	Orin Kayes.....	Norwich, Ct.....	Sept. 6, 1833
Skins, extracting hair from.....	Edward Flint.....	New York City.....	June 30, 1837
Skiving and whitening leather....	Gilbreth and Eaton as- signees of Seth Gra- ham.....	Roxbury, Mass.....	May 10, 1836
Skiving, removing wool.....	Benjamin F. Emery.....	Bath, Me.....	July 31, 1837
Skiving sheep skins, softening and removing fleece from.....	Jonathan Mann.....	Amesbury, Mass.....	May 1, 1834
Soles, cutting.....	Richard Richards.....	Lynn, Mass.....	Dec. 16, 1844
Soles of pumps, shoes, channeling and scarfing.....	Lewis Baker.....	Fort Plain, N. Y.....	Sept. 2, 1840
Splitting hides, and shaving.....	Nathaniel P. Whiting.....	Providence, R. I.....	April 25, 1810

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Splitting leather.....	Ephraim Howard and Joshua Butters.....	Boston, Mass.....	May 3, 1820
Splitting leather.....	Joshua Butters.....	Boston, Mass.....	May 31, 1822
Splitting leather.....	Alpha Richardson....	Boston, Mass.....	April 23, 1831
Splitting leather.....	Joseph P. Shaw and John C. Briggs.....	Boston, Mass.....	Dec. 31, 1833
Splitting leather, knife for.....	Herrick Aiken.....	Brighton, Mass.....	Mar. 12, 1823
Splitting leather, sole and other..	Elias Putnam.....	Danvers, Mass.....	Nov. 20, 1838
Splitting leather and skins, shaving	Aug. S. Dawley.....	Boston, Mass.....	Mar. 22, 1831
Splitting leather, and pairing.....	Herrick Aiken.....	Middlesex, Mass....	June 12, 1835
Splitting mill, leather.....	Phineas Dow.....	Boston, Mass.....	July 12, 1810
Splitting skins, machine for.....	Thomas O. Harrison..	New Jersey.....	May 19, 1800
Splitting skins, machine for.....	Asa W. Chickering...	Massachusetts.....	Nov. 29, 1802
Splitting skins, machine for.....	William Lillie.....	Westchester, N. Y..	Nov. 9, 1805
Splitting skins, machine for.....	Stephen Payne.....	.....	Mar. 31, 1806
Splitting skins, machine for.....	William Bent.....	Boston, Mass.....	Feb. 24, 1808
Splitting skins, machine for.....	Isaac Cobb.....	Walpole, N. H.....	July 12, 1808
Splitting skins, machine for.....	John Woodcock.....	Worcester, Mass....	May 8, 1809
Splitting skins, machine for, (im- provement on Bent's,).....	William Brown.....	Philadelphia, Pa....	Nov. 20, 1809
Splitting skins, machine for.....	William Bent.....	Boston, Mass.....	Sept. 9, 1813
Splitting skins, machine for.....	William Bent.....	Philadelphia, Pa....	June 17, 1822
Splitting skins, machine for, sheep	James Stransfield....	Virginia.....	Nov. 16, 1796
Stamping and staining leather...	Robert Robinson....	Newburyport, Mass..	Mar. 19, 1810
Straps, fastening leather.....	Charles F. Beverly...	Salem, Ohio.....	Jan. 16, 1845
Stripping leather.....	David Ridgeway.....	.....	Oct. 26, 1809
Stripping leather, alum dressed...	Samuel Frothingham and George Harris...	Middletown, Ct.....	April 20, 1806
Tanning.....	Wm. Hollingsworth...	Elkton, Md.....	July 30, 1811
Tanning.....	Alex. H. Avery.....	Bennington, Vt....	Sept. 30, 1811
Tanning.....	Jos. Barker.....	Deerfield, N. Y.....	Jan. 10, 1812
Tanning.....	Samuel Currie.....	Philadelphia, Pa....	Mar. 28, 1812
Tanning.....	Chr. Luther & J. Smith, assigned to Daniel Renner.....	Georgetown, D. C....	May 5, 1812
Tanning.....	Wm. Edwards.....	Northampton, Mass..	Oct. 19, 1812
Tanning.....	Wm. Edwards.....	Northampton, Mass..	April 3, 1816
Tanning.....	Bradford A. Potter...	Manlius, N. Y.....	Sept. 26, 1816
Tanning.....	Leonard Jacobs.....	Missouri.....	Feb. 10, 1822
Tanning.....	Joshua Galbraith....	Trenton, N. J.....	Oct. 15, 1823
Tanning.....	J. Wampler & G. Mat- thew.....	Steubenville, Ohio..	Aug. 27, 1824
Tanning.....	Henry Bretney.....	Lebanon, Ohio.....	Mar. 24, 1825
Tanning.....	Samuel and Amos Wil- liams.....	Orange, N. J.....	Nov. 12, 1825
Tanning.....	Leonard Jacobs.....	Richmond, Va.....	Mar. 1, 1826
Tanning.....	Osmond Cogswell....	Cincinnati, Ohio....	Sept. 18, 1827
Tanning.....	Hy. C. Locker, adm'r of Henry Locker....	Lancaster, Pa.....	Mar. 18, 1836
Tanning.....	Laban Emery.....	New York.....	Mar. 19, 1836
Tanning.....	Simeon Heath.....	Pike, N. Y.....	May 23, 1836
Tanning.....	John Cox.....	Gorgie Mills, Edin- bro', Scotland....	June 5, 1844
Tanning.....	Adam Kettering & A. Vogle.....	Hempfield, Penn....	June 24, 1844
Tanning.....	William Brown.....	Manchester, Md.....	Aug. 1, 1844
Tanning.....	Simon Snider.....	Dayton, Ohio.....	April 10, 1845
Tanning.....	Francis D. Parmelee..	Akron, Ohio.....	Nov. 1, 1845
Tanning.....	William Germar.....	Easton, Pa.....	July 2, 1846
Tanning apparatus, removing the refuse bark from the leathers...	Wm. Browne.....	Mooresville, N. Y..	Nov. 2, 1831
Tanning, bark for.....	Daniel Williams.....	Boston, Mass.....	Feb. 5, 1836
Tanning, bark of chestnut tree...	Wm. Sheldon.....	Springfield, Mass..	Feb. 26, 1819

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Tanning, breaking, fleshing and hairing hides.....	Johnson Dunaway...	Woodville, Va.....	May 13, 1834
Tanning, breaking, working, and scouring hides.....	Josiah Bonney.....	Cornwall, Ct.....	May 24, 1834
Tanning, construction of vats....	James R. Deniston...	Connersville, Ind....	Aug. 1, 1834
Tanning and coloring matter.....	George C. Cloee and Edward Field.....	Port Chester, N. Y..	April 22, 1845
Tanning and currying.....	Jonathan Prescott...	Augusta, Me.....	Mar. 6, 1818
Tanning, handling hides in the vats	Samuel Stern & Daniel Wierman.....	Mechanicstown, Md.	Jan. 9, 1834
Tanning, in hemlock.....	Jno. Lansing, jr.....	Albany, N. Y.....	April 20, 1819
Tanning, heating water for, in cold weather.....	Caleb Atwater.....	Genoa, N. Y.....	June 2, 1813
Tanning hides.....	Edward Siter.....	Spread Eagle, Pa....	Aug. 14, 1810
Tanning hides.....	Jas. Batchelder.....	Grafton, N. H.....	Dec. 22, 1818
Tanning hides.....	John Lippincott and John Hillyer.....	Philadelphia, Pa....	April 14, 1835
Tanning hides.....	Abraham Van Felt...	Bedminster, N. J....	July 8, 1842
Tanning hides, liming and handling in.....	Caleb Hank.....	Monroe county, Va.	May 3, 1832
Tanning hides by machinery.....	Webb Wallace.....	Lebanon tp., Pa. }	July 20, 1842
	Joseph Fleming.....	Sandistontp., N. J. }	
Tanning hides and skins.....	Thos. G. Peachy.....	Williamsburg, Pa....	Dec. 28, 1833
Tanning hides and skins by compression rollers.....	E. S. and D. Bell....	Smithfield, Va.....	July 28, 1834
Tanning hides.....	Richard T. Downing & George D. Smith.	Monroe county, } Pa	April 30, 1840
	William Herapath....	Bristol, England....	
Tanning hides and skins*.....	Daniel Howell, ass'tee of W. Buchanan....	New York.....	Dec. 17, 1840
Tanning hides and skins.....	Simson Guilford....	Lebanon, Pa.....	Nov. 10, 1841
Tanning, improvement in.....	Isaac M. Belote.....	Fayette county, Ten.	April 14, 1835
Tanning, (improvement on Dawes mode,).....	Mark W. Jenkins....	Baltimore, Md.....	Mar. 10, 1834
Tanning leather.....	Jas. Davis.....	Massachusetts.....	April 14, 1796
Tanning leather.....	Samuel Parker.....	Billerica, Mass.....	July 9, 1808
Tanning leather.....	Jos. Barker.....	Deerfield, N. Y.....	May 10, 1811
Tanning leather.....	William Browne.....	New York.....	Nov. 11, 1800
Tanning leather.....	Osmond Cogswell....	Cincinnati, Ohio....	Jan. 29, 1831
Tanning leather.....	Isaac Dawes.....	Goshen Farm, Md....	April 21, 1831
Tanning leather.....	Joseph Blunt.....	New York.....	Nov. 30, 1832
Tanning leather.....	L. C. Dudley and S. Brooks.....	Portland, Me.....	Oct. 23, 1834
Tanning leather, and mode of lifting hides.....	James Coxe.....	New Jersey.....	Feb. 20, 1800
Tanning leather, vats for.....	W. L. J. C. Romes & Silas Taylor.....	Bedford, Va.....	June 20, 1838
Tanning by machinery.....	Joseph Southwick....	Boston, Mass.....	April 11, 1832
Tanning by machinery.....	David H. Mason.....	Dahlonega, Georgia.	Dec. 5, 1842
Tanning, machinery for preparing hides.....	Lewis Newsom.....	Gallipolis, Ohio.....	Mar. 8, 1832
Tanning, manufacturing hides....	E. Shove and T. Hunt	Locke, N. Y.....	May 13, 1838
Tanning or manufacturing leather	Walter Russell.....	Ashburnham, Mass.	Jan. 23, 1834
Tanning or manufacturing leather	George Bow.....	Watertown, N. Y....	Feb. 6, 1834
Tanning, preparing extract of bark for.....	Otis Batchelder.....	Bedford, N. H.....	Nov. 7, 1835
Tanning, preparing skins.....	J. C. F. Salmon.....	Reading, Pa.....	Oct. 17, 1835
Tanning, process of.....	Thomas Chase, (ass'td to G. H. Richards.)	New York City.....	Nov. 25, 1836
Tanning, removing the refuse bark from letches.....	Harvey W. Belcook....	Cooperstown, N. Y.	Dec. 24, 1833
Tanning, scraping flesh and hair from hides.....	Thomas Williams....	Rochester, N. Y....	Nov. 4, 1830
Tanning skins and hides.....	George H. Richards..	New York.....	Dec. 16, 1833

* Antedated Nov. 16, 1837

† Reissued October, 31 1831.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Tanning sole leather.....	Wm. Edwards.....	Northampton, Mass.	Dec. 30, 1812
Tanning sole leather.....	Abel H. Buzzel.....	N. Bridgewater, Mass.	Aug. 25, 1840
Tanning, and tanyards.....	Leonard B. Johnson..	Tompkinsville, Ky..	Mar. 3, 1839
Tanning, without the use of lime, or sweating hides.....	Edward Evans.....	Salem township, Pa.	Dec. 28, 1832
Tan-vats.....	Nathl. Burley.....	Stratford, N. H.....	Jan. 24, 1811
Tan-vats.....	John W. Moon.....	Roxbury, Mass.....	April 18, 1833
Tan-vats, constructing.....	Aaron Higgins.....	Florence, Ohio.....	April 24, 1826
Tan-vats, heating water in them..	Allen Henderson.....	Gt. Barrington, Mass.	Nov. 24, 1810
Tan-vats, or letchers, and convey- ing trough.....	William Brown.....	Herkimer, N. Y....	June 28, 1832
Tan-vats, reservoirs, constructing with cement.....	John C. Johnson.....	Catskill, N. Y.....	Feb. 20, 1835
Tanyard.....	Abram. Ccnwell.....	Fayette county, Ind.	Nov. 4, 1831
Trunks, leather.....	Robert C. Martin....	Philadelphia, Pa....	Aug. 28, 1824
Trunks, rendering them water- proof.....	Peter Getz.....	Lancaster Pa.....	Nov. 7, 1840
Trunks, and settee.....	Benjamin Morris.....	New Richmond, O....	Jan. 16, 1835
Trunks, travelling.....	Washington Sweetzer..	Portsmouth, N. H..	July 1, 1836
Trunks, travelling, fire and water proof.....	Charles F. Miller....	Lancaster, Pa.....	June 20, 1836
Trunks, travelling.....	John Fitzgibbon.....	Boston, Mass.....	Oct. 11, 1841
Trunks, travelling.....	John W. Beackley...	Philadelphia, Pa....	May 26, 1843
Trunk, travelling.....	James Hibson.....	New York, N. Y....	April 4, 1846
Trunk, travelling and life preserver	Edward G. Fitch.....	New Orleans, La....	Aug. 18, 1846
Trunks, valises.....	James W. Noble.....	Pittsfield, Mass.....	Jan. 15, 1836
Trunks, valises.....	William Brown.....	Brooklyn, N. Y....	July 1, 1836
Trunks, valises.....	Matthias Steiner.....	New York City....	Dec. 20, 1837
Uniting leather by medal or wood- en pegs.....	Sidney B. Brown.....	Westchester co. N. Y.	April 2, 1814
Visors, leather, machine for cut- ting, for caps.....	John Hawkins.....	Roxbury, Mass.....	Feb. 20, 1832
Water proof leather.....	David Kizer.....	New York.....	Nov. 19, 1827
Water proof leather.....	Abraham Straub.....	Milton, Pa.....	June 30, 1828
Water proof leather and cloth....	J. L. Comstock.....	Hartford, Ct.....	Jan. 21, 1828
Water proof leather, elastic.....	Peter L. Lannay.....	Baltimore, Md.....	Dec. 4, 1816
Whips, platting, machine for cov- ering.....	Seymour Holladay...	Westfield, Mass....	April 4, 1838
Wool, removing from skins.....	F. and H. Robinson..	Wilmington, Del...	May 15, 1841

CLASS No. XVII.

HOUSEHOLD FURNITURE,

**Machines and Implements for Domestic Purposes, including
Washing Machines, Bread and Cracker Machines,
Feather Dressing, &c.**

LIST OF PATENTS.

CLASS XVII.—HOUSEHOLD FURNITURE, *Machines and Implements for Domestic purposes, including Washing Machines, Bread and Cracker Machines, Feather Dressing, &c.*

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Bed-bug, destroying.....	Richard Sealey	New York.....	June 20, 1823
Bed-bug, destroying.....	Joseph H. Clarke.....	Connorsville, Ind. . .	May 31, 1834
Bed-bug, destroying.....	Britain Garrard.....	Marysville, Tenn. . .	Mar. 13, 1836
Bed-bug, destroying by steam . . .	Benjamin Overman . . .	Greensborough, N. C .	June 22, 1832
Bed-bug, destroying by steam . . .	Thomas Miller.....	Newburgh, N. Y. . . .	Nov. 19, 1833
Bed-bug, destroying by steam . . .	Jonathan Howlet.....	Greensborough, N. C .	July 10, 1834
Bed-bug, preventing ascent of posts	James A. Clarke.....	Georgetown, D. C. . .	June 13, 1829
Beds, cork, to the filling of.....	Stephen Bates.....	Boston, Mass.....	Dec. 28, 1832
Beds, palm leaf, or grass*	Joseph C. Smith.....	Cambridgeport, N. Y .	April 3, 1835
Beds, spring.....	Josiah French.....	Ware, Mass.....	Aug. 25, 1831
Beds, spring, elevating and depressing surface	Alonzo G. Hull.....	New York.....	Oct. 1, 1831
Beds, spring, spiral.....	M. F. Moody and B. Eastman	Northampton, Mass. .	April 13, 1836
Beds, spring, spiral, conical.....	W. J. and A. E. Lyman	East Hampton, Mass. .	Sept. 18, 1835
Beds, warming	Peter Lannay.....	Baltimore, Md.....	Nov. 11, 1823
Bedstead.....	Ludwick C. Kuhn . . .	Philadelphia, Pa. . . .	Aug. 10, 1791
Bedstead.....	Ward Gillman & Wm. Jackson	Portsmouth, N. H. . .	Mar. 13, 1804
Bedstead.....	John R. Cox.....	Philadelphia, Pa. . . .	Oct. 16, 1812
Bedstead.....	Daniel Powles.....	Baltimore, Md.....	Oct. 31, 1821
Bedstead.....	Peregrine Williamson	Baltimore, Md.....	Dec. 6, 1821
Bedstead.....	Peregrine Williamson	Baltimore, Md.....	Oct. 17, 1822
Bedstead.....	Leonard Foster.....	Boston, Mass.....	June 25, 1824
Bedstead.....	O. R. Herbert.....	Mount Pleasant, N. J .	July 14, 1824
Bedstead.....	Isaac Cooper.....	Baltimore, Md.....	Feb. 22, 1825
Bedstead.....	William Bell.....	Lexington, Ky.....	Nov. 7, 1826
Bedstead.....	Samuel Davis.....	Catskill, N. Y.....	Dec. 29, 1826
Bedstead.....	Silas Hyde.....	Arcadia, N. Y.....	May 2, 1828
Bedstead.....	Harvey Wilbur.....	Newburyport, Mass. .	June 16, 1828
Bedstead.....	E. Rogers & M. Pearson	Essex county, Mass. .	June 11, 1829
Bedstead.....	Rufus Belt.....	Centerville, Ky.....	Feb. 22, 1831
Bedstead.....	William Gambel.....	Baltimore, Md.....	Aug. 25, 1831
Bedstead.....	Cornelius Van Noy . .	Lexington, Ky.....	Jan. 10, 1832
Bedstead.....	Bethel Judd.....	New London, Ct.....	May 25, 1832
Bedstead.....	Henry Reisinger.....	York, Pa.....	Aug. 18, 1832
Bedstead.....	Gideon Vaughan, jr. .	Philadelphia, Pa.....	Sept. 18, 1833
Bedstead.....	Isaac Eaton.....	Mount Gilead, Va.....	Dec. 31, 1833
Bedstead.....	Robert Miller.....	Glasgow, Ky.....	May 23, 1834
Bedstead.....	Ezra Coleman.....	New Bedford, Mass. .	Oct. 31, 1834
Bedstead.....	B. Humphreyville and J. King	Morristown, N. J. . .	Dec. 17, 1834
Bedstead.....	Perry Prettyman.....	Georgetown, Del.....	Dec. 31, 1834
Bedstead.....	B. F. Berry.....	Utica, N. Y.....	April 22, 1835
Bedstead.....	Perry Prettyman.....	Georgetown, Del.....	Sept. 26, 1835
Bedstead.....	Jonas Maguire.....	Philadelphia, Pa.....	Jan. 15, 1836
Bedstead.....	Christian Kniseley.....	Meadville, Pa.....	June 16, 1836
Bedstead.....	Samuel P. Smith.....	Salina, N. Y.....	Oct. 26, 1836
Bedstead.....	Charles W. Curtis.....	New Haven, Conn.....	Dec. 12, 1842
Bedstead.....	John Morris.....	Derby, Ct.....	July 8, 1843

* Reissued March 18, 1841; E. Howe, assignee.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Bedstead.....	Wm. F. Converse, R. H. Penny, and R. S. Hanniford.....	Harrison, Ohio.....	Dec. 31, 1844
Bedstead*.....	C. S. Debow.....	New York, N. Y.....	April 18, 1846
Bedstead.....	Henry Pace, sr.....	Cincinnati, Ohio.....	Dec. 10, 1848
Bedstead.....	Joseph W. Adams, assigner to Lewis & Clapp	Boston, Mass.....	Sept. 10, 1846
Bedstead, alleviator.....	John Lowe.....	Vienna, N. Y.....	Oct. 25, 1890
Bedstead, alleviator.....	John Lowe.....	Whitesborough, N. Y.	Nov. 21, 1831
Bedsteads, attaching curtain posts to.....	Thomas Early.....	Washington co., Ten	Jan. 8, 1839
Bedstead and bed for the sick.....	Jer. Bailey.....	Philadelphia, Pa.....	Mar. 18, 1835
Bedstead, bisected.....	Peter Breasted.....	Green county, N. Y.	Feb. 21, 1836
Bedstead, bureau.....	Henry W. Kingman.....	New York, N. Y.....	Oct. 12, 1844
Bedstead, or chair, hospital.....	Williams Woolley.....	New York.....	Sept. 23, 1831
Bedstead, constructing.....	C. J. Fountain, J. F. Adams and G. F. Hillyer.....	New York.....	April 30, 1839
Bedstead, constructing.....	John Hart.....	Lebanon, Ky.....	Mar. 3, 1840
Bedstead, constructing and cording the same.....	Martin Engel.....	Easton, Pa.....	April 24, 1840
Bedstead, cot.....	Peregrine Williamson.....	Baltimore, Md.....	Nov. 11, 1839
Bedstead, cot.....	Samuel Clarke.....	New York.....	Mar. 22, 1838
Bedstead, cutting screws on the ends of the rails of.....	Jacob Lindly.....	Cynthiana, Ky.....	Oct. 10, 1840
Bedstead, cutting screws on the ends of the rails of.....	Joel Thompson.....	Cynthiana, Ky.....	July 20, 1842
Bedstead, cutting tenons & boring holes in the rails of.....	Thomas Cole.....	Greensburg, Ind.....	Nov. 12, 1841
Bedstead, elevating, for the sick.....	David Bancroft.....	Grafton, Vt.....	Oct. 12, 1839
Bedstead, dovetailed joint.....	John Mitchell.....	Harrisburg, Pa.....	Jan. 11, 1836
Bedstead, draw key.....	John McClintic.....	Chambersburg, Pa.....	Nov. 2, 1835
Bedstead, draw key, double tenon	Samuel Cooper.....	Chambersburg, Pa.....	Nov. 5, 1835
Bedstead fastening.....	Edwin H. Badger.....	Petersburg, Va.....	April 3, 1838
Bedstead fastening.....	Wm. Swift and Wm. Ottiwell.....	New Bedford, Mass.....	Oct. 11, 1839
Bedstead fastening.....	Hardin Branch.....	New York.....	April 18, 1833
Bedstead fastening.....	John Richman.....	Lancaster, Ohio.....	Dec. 29, 1832
Bedstead fastening.....	George Porter.....	Cincinnati, Ohio.....	Dec. 30, 1833
Bedstead fastening.....	Ira McLaughlin.....	Sunderland, Vt.....	April 23, 1836
Bedstead fastening.....	William Bell.....	Lexington, Ky.....	Feb. 15, 1839
Bedstead fastening.....	Pardon Post.....	New Haven, Ct.....	June 12, 1838
Bedstead fastening.....	Laurens Kent.....	Dorset, Vt.....	Sept. 12, 1838
Bedstead fastening.....	Adin Gauat, assignee of Ira Smith.....	Chagrin Falls, Ohio.....	Oct. 25, 1845
Bedstead fastening.....	Joseph Rodefer.....	Cincinnati, Ohio.....	Dec. 18, 1839
Bedstead fastening.....	Wm. H. Sabin.....	New Milford, Pa.....	May 12, 1840
Bedstead fastening.....	Hermann C. Ernst.....	Vandalia, Ill.....	Feb. 23, 1841
Bedstead fastening.....	James Knipe.....	New York, N. Y.....	Jan. 8, 1840
Bedstead fastening.....	Daniel Ball.....	Sandy Hill, N. Y.....	April 16, 1843
Bedstead fastening.....	John Fowler.....	Pittsburg, Pa.....	July 11, 1842
Bedstead fastening.....	Joseph Guild.....	Cincinnati, Ohio.....	Dec. 20, 1843
Bedstead fastening, attaching and stretching sacking.....	Mahlon Gregg.....	Philadelphia, Pa.....	Mar. 25, 1840
Bedstead fastening, easy draft.....	Peter T. Wolcott.....	Monmouth co., N. J.	Jan. 6, 1819
Bedstead key.....	J. Blake & D. Cushing	Providence, R. I.....	Dec. 14, 1830
Bedstead machine.....	Aaron Stedman.....	Pittsford, N. Y.....	Jan. 16, 1835
Bedstead, machine for cutting screws on.....	H. P. Nuckols.....	Glasgow, Ky.....	Mar. 4, 1846
Bedstead, making and putting together.....	John Haslet and Cornelius Devett.....	Irville, Ohio.....	May 9, 1846
Bedstead and mattress.....	Edmund Cherrington.....	Boston, Mass.....	Nov. 23, 1833
Bedstead, parturient invalid.....	J. N. Robbins.....	Troy, Mo.....	Oct. 20, 1832
Bedstead, portable.....	Jacob Daley.....	Baltimore, Md.....	May 14, 1837

* Antedated April 11, 1846.

INVENTIONS OR DISCOVERIES.	PATENTÉES.	RESIDENCE.	WHEN ISSUED.
Bedstead, portable metallic	Jos. Homer	New York	Jan. 28, 1818
Bedstead rails, cutting screws on the ends of	Jacob Lindly	Cynthiana, Ky.	June 20, 1838
Bedstead, right and left screw	John Copan	New York	June 11, 1839
Bedstead, revolving rail	Garret Post	Auburn, N. Y.	Oct. 11, 1828
Bedstead, sacking bottoms	Daniel Powles	Baltimore, Md.	Jan. 26, 1827
Bedstead, sacking bottoms of	Isaac Cooper	Johansstown, Pa.	Oct. 7, 1844
Bedstead, sacking, stretching	Wm. S. Anderson	Shelbyville, Tenn.	June 4, 1838
Bedstead screws, cutting	Joseph Guild	Cincinnati, Ohio.	Oct. 29, 1846
Bedstead, secret.	Williams Woolley	New York	May 17, 1830
Bedstead, secret, for sofas and settees	Williams Woolley	New York	Oct. 3, 1831
Bedstead, securing and fastening the rails of	John P. Allen	Manchester, Mass.	Nov. 3, 1841
Bedstead for the sick	Avery Smith	Milo, N. Y.	July 12, 1830
Bedstead for the sick	William Leo Wolfe	New York	July 15, 1834
Bedstead for the sick*	Williams Woolley	New York	Aug. 30, 1834
Bedstead for the sick	David Anthony	Adams, Mass.	Sept. 13, 1834
Bedstead for the sick	Nathaniel Richardson	Boston	Sept. 9, 1835
Bedstead for the sick	Williams Woolley	New York city	April 16, 1842
Bedstead, sofas, settees	John P. Allen	Manchester, Mass.	May 19, 1832
Bedstead, sofa	Alexander D. Farrell	New York city	May 2, 1843
Bedstead, sofa	William Clows	Hartwood, N. Y.	June 24, 1843
Bedstead, sofas, settees	Francis Breckels	New York	April 7, 1834
Bedstead, sofa	Nicholas McGraw	New York city	Dec. 10, 1838
Bedstead, sofa	James M. Meschutt	New York	July 23, 1841
Bedstead, sofa, raising or inclining	Edmund Cherrington	Boston, Mass.	Feb. 9, 1839
Bedstead, sofa	John Needham	New York city	Aug. 20, 1846
Bedstead, sofa	Joel Pratt, 2d.	Hartford, Conn.	April 1, 1842
Bedstead, sofa	G.L.F. Griswold, ass'e of G. Sickels.	Middletown, Ct.	Dec. 4, 1844
Bedstead, sofa, sliding	George W. Wode	New York city	June 12, 1838
Bedstead, tightening sacking bottom of	John Hart	Nicholasville, Ky.	June 21, 1839
Bedstead, tightening sacking bottom of	Benijah Bosworth	Fayette county, Ky.	Dec. 14, 1839
Bedstead, wardrobe	Zebulon C. Favor	Boston, Mass.	April 2, 1838
Bedstead, windlass	Leonard Foster	Boston, Mass.	Feb. 16, 1824
Bedstead, windlass	Charles Adams	Boston, Mass.	Feb. 26, 1825
Bedsteads, windlass	Thomas Lamb	Washington, D. C.	Nov. 13, 1840
Bells, hanging	Arthur Lynar	New York	Dec. 24, 1819
Bells, hanging	James Russell	New York	Oct. 16, 1829
Bells, hanging	Seth Fuller	Boston, Mass.	Dec. 26, 1838
Bells, hanging	Joseph Currier	Boston, Mass.	Jan. 23, 1834
Bells, hanging and mode of constructing	Ebenezer Dewey	New York, N. Y.	April 10, 1830
Bells, household, hanging	Edward Stetson	New Bedford, Mass.	Aug. 17, 1843
Bread, biscuit	Ephraim Treadwell	New York	May 18, 1826
Bread, finisher	Ephraim Treadwell	Philadelphia, Pa.	Jan. 10, 1820
Bread, knife for cutting	Franklin Roys	Berlin, Ct.	Oct. 9, 1844
Bread, making, constructing machines for	William Carr	Bath, Me.	July 22, 1843
Bread, making	William Banks	Connecticut	Dec. 14, 1798
Bread, making	George Richards	Manlius, N. Y.	Feb. 8, 1813
Bread, making ship	Jehosaphat Starr	Middleton, Ct.	Jan. 8, 1813
Bread, raising	Abel Conant	Lowell, Mass.	Oct. 12, 1842
Brooms, machine for making	Jacob H. Hinton	Lancaster, Pa.	Mar. 13, 1844
Broom making	Shadrack H. Weed	Poughkeepsie, N.Y.	Feb. 3, 1819
Broom making	Adam Sclater	Oxford towns'p, Pa.	Feb. 15, 1826
Broom making	John M. Spooner	Belchertown, Mass.	April 28, 1838
Brooms, metallic clasp or head for	Isaac Cheney	Leyden, Mass.	June 25, 1839
Brooms, winding wire or twine on	William Beeman	Salem, N. J.	Aug. 17, 1843
Brush, art of making	William Steele	New York	Aug. 17, 1835
Brush block	Stacy Costill	Philadelphia, Pa.	Feb. 25, 1824

† Additional improvement Feb. 22, 1838.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Brush, brooms of grass.....	S. H. Weed.....	New York.....	Feb. 28, 1825
Brush, broom, and other handles.	Evans Turk.....	Harrisburg, Pa.....	May 18, 1832
Brushes, attaching the bristles to	Robert B. Lewis.....	Hallowell, Me.....	Feb. 23, 1841
Brushes, filling blocks with bristles for.	Samuel Taylor.....	Cambridge, Mass. }	May 1, 1845
	Abbott R. Davis.....	Boston, Mass. }	
Brush, machine for making broom corn.....	Bazaleel Croasdale....	Byberry, Pa.....	Dec. 21, 1819*
Brush, machine for white washing	Elijah S. Curtis.....	Charlestown, Mass.	June 2, 1820
Brush, manufacturing.....	David Wooster.....	China, N. Y.....	Feb. 16, 1829
Brush, manufacturing.....	John J. Adams.....	Boston, Mass.....	Mar. 12, 1842
Brushes, scrubbing.....	George Carver.....	Chambersburg, Pa.	Aug. 1, 1844
Brushes, trimming the bristles of.	Samuel Taylor.....	E. Cambridge, Mass.	May 17, 1844
Brush trimming machine.....	Benjamin Eabbitt.....	New York, N. Y.....	Oct. 14, 1846
Chairs.....	Jacob Daley.....	Baltimore, Md.....	Feb. 22, 1827
Chairs.....	Eli F. Benjamin.....	Utica, N. Y.....	Aug. 17, 1835
Chairs, bottoms.....	Abner Ellis.....	Dedham, Mass.....	June 12, 1811
Chairs, bottoms.....	James Elliot, jr.....	Philadelphia, Pa.....	May 26, 1812
Chairs, bottoms, table tops.....	John Wall.....		Oct. 29, 1816
Chairs, combined rocking & castor	John David Brown.....	New York city.....	Oct. 5, 1838
Chairs, convalescing.....	John Mead.....	Albany, N. Y.....	Mar. 14, 1817
Chairs, couches, and sofas.....	Charles Adams.....	Boston, Mass.....	April 18, 1831
Chairs, eagle.....	William J. Weaver.....	New York.....	June 14, 1816
Chairs, easy.....	Joseph B. Finney.....	Keene, N. H.....	May 8, 1823
Chairs, easy.....	Benj. F. Hays.....	Pittsfield, Mass.....	Dec. 17, 1834
Chairs, easy*.....	Andrew Wood.....	Charlestown, Va.....	June 28, 1836
Chairs, elastic.....	Samuel Gragg.....	Boston, Mass.....	Aug. 31, 1808
Chairs, eccentric and pivot.....	Jordan L. Mott.....	New York.....	Aug. 20, 1845
Chairs, machine.....	Ichabod Lewis.....	Irville, Ohio.....	May 25, 1830
Chairs, nursing.....	Andrew Wood.....	Charlestown, Va.....	Mar. 13, 1822
Chairs, posts.....	Elijah Farrington.....	New York.....	Oct. 29, 1816
Chairs, reclining.....	John Mead.....	Albany, N. Y.....	Mar. 18, 1816
Chair, recumbent†.....	Henry P. Kennedy.....	Philadelphia, Pa.....	May 22, 1841
Chair, revolving.....	Matthew W. King.....	New York.....	Aug. 25, 1840
Chair, rocking.....	Samuel H. Bean.....	Philadelphia, Pa.....	Mar. 31, 1840
Chair, rocking.....	Charles L. Bander.....	Utica, N. Y.....	April 6, 1842
Chair, rocking.....	Charles A. Ballard.....	Boston, Mass.....	Dec. 5, 1843
Chairs, rocking.....	A. C. Stiles.....	S. Bloomfield, Ohio.	Sept. 27, 1844
Cheese, machine for turning and curing	Henry Webber.....	East Richfield, N.Y.	April 22, 1835
Clothes horse, connecting frames of.....	Harvey Luther.....	Providence, R. I.....	May 19, 1841
Clothes vice.....	Samuel Prior.....	Salem, N. J.....	Mar. 22, 1832
Clothes, scouring.....	David Dickinson.....	Chatham, Ct.....	Oct. 1, 1830
Coffee and tea, making.....	Antoni Bencini.....	Milton, N. C.....	Sept. 27, 1838
Coffee pots, design for.....	John R. Remington.....	Lowndes, Ala.....	Oct. 6, 1843
Coffee pots.....	Daniel Rowland.....	Washington, D. C.	Sept. 17, 1844
Coffee pots.....	John R. Remington.....	Lowndes co., Ala.....	Dec. 22, 1846
Cot, or cross bedstead sofa.....	Gerard Sickels.....	Middletown, Ct.....	Sept. 25, 1840
Couch, accommodation.....	John Mead.....	Albany, N. Y.....	Mar. 13, 1817
Couch, variety.....	Eleazer Carver.....	Bridgewater, Mass.....	June 12, 1838
Crackers and biscuit, cutting.....	William Little.....	New Orleans, La.....	Sept. 21, 1815
Crackers and biscuit, cutting†	Daniel Poole.....	Dauphin co., Pa.....	Dec. 24, 1824
Crackers and biscuit, cutting.....	John & Chas. Bruce.....	Kings co., N. Y.....	Mar. 13, 1832
Crackers and biscuit, cutting.....	Eph. Treadwell.....	New York.....	May 18, 1836
Crackers and biscuit, making and baking.....	Benjamin F. Mason.....	Kennebunk Port, Me	June 6, 1839
Crackers, cutting‡.....	Thomas Bladen.....	Philadelphia, Pa.....	Mar. 16, 1830
Crackers, cutting§.....	Jos. Clark & H. Henderson.....	Baltimore, Md.....	Sept. 13, 1830
Crackers, cutting¶.....	Jos. Clark & H. Henderson.....	Baltimore, Md.....	June 13, 1831
Crackers, cutting.....	J. P. Fairlamb & Miller Dunot.....	Wilmington, Del.....	June 13, 1831
Crackers, cutting.....	John S. Stiles.....	Baltimore, Md.....	Aug. 9, 1834

* Additional Imp. S. H. Allemon, ex'or, April 5, 1838. † Antedated April 12, 1841.
 ‡ Reissued May 20, 1834. § Reissued Oct. 1, 1830. ¶ Reissued, Sept. 18, 1833. † Reissued Sept. 18, 1833.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Crackers, cutting.....	George M. Kendall...	Catskill, N. Y.....	May 3, 1833
Crackers, cutting.....	Lucius Kirtland.....	New Haven, Ct.....	Sept. 4, 1834
Crackers, cutting.....	Thomas & Thomas H. Havener.....	Washington, D. C.....	Oct. 17, 1835
Crackers, cutting.....	W. R. Nivens.....	New York.....	Oct. 17, 1835
Crackers, cutting.....	Levin P. Clark.....	Baltimore, Md.....	Nov. 7, 1845
Crackers, cutting.....	William Perkins.....	Boston, Mass.....	April 2, 1841
Crackers, cutting.....	Charles P. Fobes.....	Baltimore, Md.....	July 17, 1841
Crackers, cutting.....	William R. Nevins..	New York.....	Nov. 10, 1841
Crackers, cutting and rolling.....	Daniel Poole.....	Philadelphia, Pa.....	Dec. 24, 1824
Crackers, cutting and rolling.....	James Cooper.....	Philadelphia, Pa.....	Mar. 11, 1830
Crackers, cutting and rolling.....	W. R. Nivens.....	New York.....	Mar. 2, 1836
Cracker machine.....	W. H. Tuttle, ass'nee of J. Johnson and O. Freeman.....	Boston, Mass.....	May 17, 1844
Crackers, making.....	Humphrey Winslow..	Swansey, Mass.....	Dec. 14, 1840
Crackers, making.....	Riley Darling.....	E. Greenwich, R. I.	Sept. 30, 1841
Crackers, moulding.....	Joshua G. Driscoll..	Auburn, N. Y.....	Nov. 19, 1833
Crackers, ship bread.....	Nathan Daskam & D. G. Wood.....	Geneva, N. Y.....	Aug. 5, 1830
Cradle.....	Samuel Pope.....	Windsor, Ct.....	June 15, 1813
Cradle.....	Peter Cooper.....	Hempstead, N. Y.....	Mar. 27, 1815
Cradle, and chair rockers.....	Samuel Simmons.....	Baltimore, Md.....	Dec. 21, 1819
Cradle, or crib.....	John M. Read.....	New York.....	Feb. 27, 1830
Cradle rockers.....	Henry R. Taylor.....	Roxbury, Mass.....	Jan. 16, 1843
Cradle, self-moving.....	A. Buchenberger.....	New York.....	Nov. 3, 1829
Cradle, swing.....	Zach. Mills.....	Hartford, Ct.....	July 17, 1806
Cradle, ewing.....	John McKinney.....	West Chester, Ohio.	June 13, 1831
Cups and saucers, metallic.....	John Lave.....	Baltimore, Md.....	June 14, 1814
Curtains, window and bed.....	William F. Phyle.....	New York.....	Feb. 19, 1830
Cushion, elastic spring.....	Sherman Blair.....	New Haven, Ct.....	Aug. 1, 1823
Cutting apples.....	William Kling.....	New Holland, Pa.....	April 28, 1818
Cutting apples.....	A. Glendenning.....	Loudoun co., Va.....	Sept. 9, 1823
Cutting apples.....	Daniel Davis, 2d.....	Stafford, Ct.....	Mar. 13, 1834
Cutting apples, coring & quartering.....	Cyrus Gates.....	Rutland, Vt.....	Dec. 15, 1810
Cutting apples, coring, quartering.....	Robt. W. Mitchell..	Martin's Hill, O.....	April 13, 1838
Cutting apples, and paring.....	Moses Coates.....	Pennsylvania.....	Feb. 4, 1803
Cutting apples, and paring.....	Stephen Cruttenden..	Guilford, Ct.....	Aug. 25, 1809
Cutting apples, and paring.....	R. and A. Mosher.....	Galway, N. Y.....	Dec. 28, 1833
Cutting apples, and paring.....	Cyprian S. Pratt.....	Paris, Me.....	Dec. 28, 1829
Cutting apples, and paring.....	John W. Hatcher.....	Bedford county, Va	Feb. 3, 1836
Cutting apples, and paring.....	Willard Badger.....	Boston, Mass.....	Feb. 16, 1809
Cutting beef.....	Henry Bangs.....	New York.....	April 27, 1831
Cutting blubber*.....	Geo. & J. J. Kilburn.	Fall River, N. Y.....	Nov. 16, 1841
Cutting cabbages.....	F. Berkeymeger and J. Dangler.....	Greenwich, Pa.....	Nov. 14, 1826
Cutting meat.....	Haziel Smith.....	Philadelphia, Pa.....	July 19, 1811
Cutting meat.....	Benjamin Meeker.....	Brooklyn, N. Y.....	Oct. 21, 1815
Cutting meat.....	John Morris.....	Derby, Ct.....	Feb. 25, 1835
Cutting meat.....	J. Masser & S. Smith	Megentown, Pa.....	June 2, 1836
Cutting meat.....	John Morris.....	Derby, Ct.....	Nov. 20, 1837
Cutting meat.....	Henry Baus.....	New York.....	Dec. 24, 1830
Cutting meat.....	Benton P. Coston....	Philadelphia, Pa.....	June 13, 1831
Cutting meat.....	Jos. Buffington.....	Chester, Pa.....	July 5, 1833
Cutting meat and other substances.....	John Morris.....	Derby, Conn.....	Feb. 28, 1842
Cutting potatoes.....	Abel Williams.....	Ashfield, Mass.....	Mar. 12, 1839
Cutting sausage meat.....	George Neff.....	Pennsylvania.....	Mar. 19, 1811
Cutting sausage meat.....	David Beissel.....	Harrisburg, Pa.....	Oct. 26, 1818
Cutting sausage meat.....	George B. Craft.....	Redstone, Pa.....	Oct. 9, 1819
Cutting sausage meat.....	Samuel Fahrney.....	Washington co., Md	Dec. 9, 1828
Cutting sausage meat.....	Elias Wade.....	Elizabethtown, N. J.	Jan. 26, 1829
Cutting sausage meat.....	Jac. Robinson.....	Lancaster co., Pa.....	Feb. 27, 1830
Cutting sausage meat.....	John Brannan.....	Baltimore Md.....	Mar. 8, 1832
Cutting sausage meat.....	Charles Otis.....	Greene, Pa.....	Nov. 29, 1832

* Antedated Sept. 20, 1841.

INVENTION OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN PATENTED.
Cooking sausage meat.....	Samuel L. Hoar.....	Salisbury, Pa.....	Feb. 1, 1866
Cutting sausage meat.....	Joseph Wagner.....	Bruswick sp., Pa.....	Mar. 19, 1866
Cutting sausage meat.....	L. Bayne and F. Rapp.....	Wheeling, Va.....	April 8, 1866
Cutting sausage meat.....	Jacob Fahrney.....	Quincy, Pa.....	Jan. 23, 1834
Cutting sausage meat.....	Dan. S. Middlebrauf.....	Hagerstown, Md.....	Jan. 23, 1834
Cutting sausage meat.....	Valentine Glass.....	Funkstown, Md.....	Feb. 6, 1834
Cutting sausage meat.....	P. Fahnestock and J. Moon, jr.....	Quincy, Pa.....	Mar. 11, 1835
Cutting sausage meat.....	A. and J. Keagy.....	Morrison Cove, Pa.....	June 15, 1835
Cutting sausage meat.....	J. Burns & J. Walter.....	Waynesborough, Pa.....	Jan. 16, 1835
Cutting sausage meat.....	Ambrose Henkel.....	New Market, Va.....	Feb. 13, 1836
Cutting sausage meat.....	William Pittenger.....	Rome, Ohio.....	Mar. 26, 1844
Cutting sausage meat.....	Edwin Clark.....	Hartford, Ct.....	Aug. 31, 1844
Cutting sausage meat.....	Geo. A. Coffman.....	Middlebrook, Va.....	Feb. 26, 1845
Cutting sausage meat and stuffing	Samuel Fahrney.....	Boonsborough, Md.....	Feb. 1, 1831
Cutting smoked beef.....	Seth R. Kneeland.....	.....	Oct. 9, 1819
Cutting soft substances.....	A. King.....	Lancaster, Pa.....	May 28, 1818
Cutting vegetables.....	Jonathan Clark.....	Hampton, Ct.....	July 7, 1835
Cutting vegetables.....	Austin H. Robbins.....	Denmark, N. Y.....	May 6, 1836
Cutting vegetables.....	Henry Melish.....	Walpole, N. H.....	June 25, 1836
Cutting vegetables.....	John G. Conger.....	Rebersburg, Pa.....	Jan. 27, 1836
Cutting vegetables, beet roots, &c.	Joseph Herd, jr.....	Boston, Mass.....	July 26, 1836
Cutting vegetables.....	George J. Neveil.....	Rising Sun, Pa.....	Oct. 14, 1840
Cutting vegetables.....	Henry Hoover, ass'ee of Martin Stoner.....	Waynesborough, Pa.....	Oct. 22, 1842
Dough, breaking.....	Nath. Pettibone.....	New York.....	Nov. 16, 1797
Dough, breaking.....	Label Folger.....	Hingham, Mass.....	Nov. 1, 1804
Dough, breaking.....	Cromwell Barnard.....	Nantucket, Mass.....	April 17, 1810
Dough, breaking or working	John W. Post.....	Baltimore, Md.....	Mar. 14, 1840
Dough-breaking machine.....	Luke Shaw.....	Bath, Maine.....	May 26, 1843
Dough, kneading.....	Samuel Nixon.....	Pr. George co., Va.....	Feb. 26, 1818
Dough, kneading.....	J. S. Fisher and S. W. Talbot.....	Dedham, Mass.....	April 23, 1822
Dough, kneading.....	N. C. Willett.....	Jonesborough, Tenn.....	Dec. 28, 1832
Dough, kneading.....	Noah Wyeth.....	Hingham, Mass.....	May 12, 1834
Dough machine.....	George Richards.....	Stonington, Ct.....	Feb. 14, 1806
Dough machine.....	D. and T. Shackford.....	Westbrook, Ct.....	Mar. 2, 1836
Dough, plating & cutting crackers	John M. Heagle.....	New Haven, Ct.....	April 13, 1838
Drawers, improvement in.....	Oliver Jenkins.....	Boston, Mass.....	June 22, 1842
Elevator, for pots and kettles	John Edwards.....	New York.....	Mar. 19, 1825
Exercise, machines for producing	Oliver Halsted.....	New York, N. Y.....	Mar. 13, 1844
Extension tables.....	Edward Richards.....	New York, N. Y.....	April 15, 1843
Extension tables.....	Cornelius Briggs.....	Roxbury, Mass.....	Sept. 1, 1843
Fan, for bed chambers.....	James Barron.....	Norfolk, Va.....	Nov. 27, 1830
Fan, for house.....	Edward Marquam.....	.....	Mar. 28, 1863
Feathers, cleaning.....	Daniel K. Hall.....	New York.....	Feb. 12, 1836
Feathers, cleaning and drying	J. H. Stevens, ass'nee of R. B. Lewis.....	New York.....	June 27, 1840
Feathers, cleaning and purifying.	George Reynolds.....	Hallowell, Me.....	Sept. 11, 1835
Feathers, cleaning and purifying.	Samuel G. Ladd.....	E. Hartford, Ct.....	Sept. 22, 1836
Feathers, dressing.....	Samuel Keplinger.....	Hallowell, Maine.....	Feb. 12, 1836
Feathers, dressing.....	Elam Wilbur.....	Baltimore, Md.....	Mar. 18, 1836
Feathers, dressing.....	Billy and Alan. Todd.....	Geneva, N. Y.....	Mar. 18, 1836
Feathers, dressing.....	George Reynolds.....	Marietta, Ohio.....	May 6, 1836
Feathers, dressing.....	Benton P. Coston.....	East Hartford, Ct.....	May 23, 1836
Feathers, dressing.....	F. P. Knowlton.....	Philadelphia, Pa.....	June 28, 1836
Feathers, dressing and cleaning	Charles Toupet.....	Clermont, N. H.....	July 2, 1836
Feathers, dressing and cleaning	George Reynolds.....	New York.....	Oct. 15, 1835
Feathers, dressing and cleaning	Orestes Badger.....	New York.....	Feb. 7, 1834
Feathers, dressing and cleaning	Samuel Swett, jr.....	Utawgo, N. Y.....	April 22, 1835
Feathers, dressing and purifying	Bartholomew Smith.....	Readfield, Maine.....	July 31, 1837
Feathers, dressing and washing	John W. Howlett.....	Schoenack, N. Y.....	Nov. 23, 1836
Feathers, drying, whipping, and cleaning.....	Nath. L. Matting.....	Greenborough, N. C.....	Oct. 5, 1836
		Boston, Mass.....	April 16, 1841

* Renewed June 13, 1831.

† Disclaimed Sept. 25, 1837.

‡ Extended Oct. 17, 1838

INVENTOR OR DISCOVERER.	PATENTEE.	RESIDENCE.	DATE ISSUED.
Footbath, rotator	J. W. Post & R. O'Brien	Baltimore, Md.	Mar. 2, 1836
Fruit and vegetable preservers	Peter Kephart	Uniontown, Md.	Sept. 24, 1844
Furniture, house, ship	Edward Clibbon	Cincinnati, O.	Sept. 12, 1837
Grater	E. B. Strong	Buffalo, N. Y.	Aug. 27, 1835
Grater, apple	Uri Swmons	New York	Feb. 13, 1832
Grater, apple	Camm Moore	Guilford co., N. C.	Dec. 30, 1826
Grater, apple	David Flegg, jr.	New York	Dec. 20, 1830
Hoisting clothes	Samuel Swett, jr.	Readfield, Me.	Dec. 30, 1833
Kaflks, bent, wood handles	Simeon Stedman	Hartford, Ct.	July 25, 1818
Maccaroni, Italian paste	John B. Saltori	Philadelphia, Pa.	July 13, 1807
Neagle	Isaac Doolittle	Bennington, Vt.	Feb. 13, 1833
Reap holders, manner of construct- ing	Sam. S. Whitman	Little Falls, N. Y.	Jan. 24, 1842
Mattresses*	Wm. H. Robertson ..	New London, Ct.	Dec. 17, 1846
Mattresses, bolsters	A. Salisbury and J. Uram	Troy, N. Y.	July 1, 1836
Mattresses, hair	Wm. F. Phyfe	New York	Oct. 1, 1830
Mattresses, palm leaf	Elias Howe	Cambridge, Mass.	Sept. 13, 1834
Mattresses, seamen's bed	Israel Martin	Boston, Mass.	Sept. 17, 1833
Mattresses, sofas	Rowland Cromelin ..	New York	Nov. 7, 1831
Mattresses, spring	Frederick Forst	Philadelphia, Pa.	June 16, 1846
Meat cutter	Harry H. Everts	Mount Morris, N. Y.	Oct. 12, 1843
Meat cutter	James M. Wilder	Peterboro', N. H.	May 10, 1845
Meat cutter	Edward D. Tippet	Georgetown, D. C.	Dec. 23, 1846
Meat, machine for cutting	Abishai Clark	Doe Run p. o., Pa.	May 9, 1846
Milk, prepare for butter & cheese ..	Calvin Ainsworth	Littleton, N. H.	Nov. 19, 1833
Mop heads	Jacob Howe	Worcester, Mass.	June 15, 1837
Mop irons	Salmon Johnson	Lee, N. Y.	Oct. 18, 1843
Preserving and holding butcher's meat, apparatus for	Adam Seltzer	Baltimore, Md.	Sept. 5, 1840
Quilling frame	Brook W. Sower	Leesburg, Va.	Dec. 23, 1831
Quilling frames, couplings in	Joseph W. Webb	Mount Morris, N. Y.	Mar. 30, 1843
Refrigerator	Thomas Moore	Maryland	Jan. 27, 1803
Refrigerator	T. W. Bronaugh & J. Talbot	Georgetown, D. C.	Mar. 16, 1813
Refrigerator	John Warring	Port Tabago, Va.	June 12, 1835
Refrigerator	R. D. Burns	Baltimore, Md.	Nov. 11, 1837
Refrigerator	Henry V. Hill	Washington, D. C.	May 25, 1838
Refrigerator	John Scott	Philadelphia, Pa.	July 10, 1840
Refrigerator	Job S. Gold	Philadelphia, Pa.	Mar. 12, 1841
Refrigerator	David Evans	Philadelphia, Pa.	Mar. 26, 1844
Refrigerators	Thomas H. King	New York	June 20, 1845
Refrigerators, for distilleries	L. C. & P. Bodman ..	Baltimore, Md.	Jan. 6, 1826
Sacking bottom	L. L. Wells	Middletown, Ct.	April 13, 1836
Sacking bottom, mode of tightening ..	John R. Simpson	Boston, Mass.	Aug. 10, 1827
Safes, to protect them from insects ..	Robert Sanderson	Athens, Ohio	Jan. 10, 1843
Safes for preserving meats	David B. Dickinson ..	Baltimore, Md.	July 16, 1849
Sausage machine	John H. Potts	Fayette, Missouri	Oct. 12, 1849
Sausages, making	A. Glendenning	Loudoun county, Va.	Sept. 9, 1824
Sausages, making	G. D. Metettal	Pittsburg, Pa.	Aug. 29, 1839
Sausages, stuffing	Samuel Fahrney	Washington co., Md.	Feb. 16, 1830
Scrubbing floors	Simon B. Willard	Bloomfield, N. Y.	Nov. 17, 1806
Scrubbing machine	Thomas Richey	Greenfield, Ohio	Dec. 26, 1833
Sink, cast iron	Zena & Levi B. Tarbox	Delaware co., N. Y.	Aug. 6, 1834
Sink, moveable	Peter Barthelmy	New York	Dec. 2, 1834
Sofa, adapted to invalids	Martin Engel	Easton, Pa.	May 12, 1840
Sofa and beds	John R. Penniman	Boston, Mass.	Aug. 22, 1827
Sofa, chairs, springs for	Edward Cherrington ..	Boston, Mass.	Nov. 23, 1835
Sofa, elastic spring	Sherman Blair	New Haven, Ct.	Feb. 2, 1829
Sofa, rocking and easy chairs	Bethel Finney	Readsborough, Vt.	Nov. 22, 1821
Sofa, or sliding joint settee	Isaiah Jennings	New York	June 25, 1824
Spittoon, design for	Henry Biggins	New York, N. Y.	Mar. 14, 1846
Table, caloric dining	H. L. B. Lewis	New York	Sept. 27, 1846
Tables, extension	Cornelius Briggs	Roxbury, Mass.	Sept. 9, 1845

* English patent dated Jan. 2, 1846.

† Additional improvement Nov. 29, 1836.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Tables, manufacturing.....	Sullivan Snow.....	Saco, Maine.....	Mar. 2, 1816
Tables, manufacturing.....	Peter Barker.....	Worthington, Ohio..	Aug. 6, 1838
Teapots and other vessels of Bri- tannia ware.....	W. W. Crossman....	Taunton, Mass.....	Mar. 12, 1834
Teakettle.....	Ezra Ripley.....	Troy, N. Y.....	Mar. 14, 1846
Vase, ornamented, design for....	John Bt. Clute.....	Schenectady, N. Y..	July 25, 1846
Vase, ornamental, design for....	Wm. and R. P. Resor.	Cincinnati, Ohio....	Oct. 10, 1846
Vegetable cutters.....	Joseph W. Webb....	Mount Morris, N. Y.	April 10, 1843
Wash board, for washing clothes*	Marcellus Sands....	Franklin, N. Y.....	Feb. 12, 1842
Washing clothes, rotary pounder for.....	Christopher Aumock.	Elbridge, N. Y.....	Mar. 10, 1838
Washing, fulling, and scouring...	Moses Chase.....	Baltimore, Md.....	Jan. 23, 1846
Washing machine.....	Nathaniel Briggs....	New Hampshire....	Mar. 28, 1797
Washing machine.....	Ezra Welds.....	Massachusetts.....	June 26, 1799
Washing machine.....	Ezra Welds.....	Massachusetts.....	Sept. 17, 1799
Washing machine.....	Samuel S. Dean.....	New York.....	Feb. 29, 1804
Washing machine.....	Abraham Higham....	Hudson, N. Y.....	May 4, 1805
Washing machine.....	Wm. J. Fulsom & John Hayden.....	Hallowell, Me.....	Dec. 17, 1805
Washing machine.....	Reuben Buck.....	Washington, N. Y..	May 29, 1806
Washing machine.....	Richard R. Elliott....	Watertown, Mass..	Feb. 28, 1807
Washing machine.....	Simeon Willard, jr..	Hudson, N. Y.....	April 25, 1807
Washing machine.....	Josiah Cleaveland...	Franklin, co., Pa...	June 6, 1807
Washing machine.....	Eb. Jones.....	Alfred, Mass.....	July 24, 1807
Washing machine.....	M. Lee and T. Barber	Oneida, co., N. Y...	Oct. 1, 1807
Washing machine.....	Wm. Wadsworth....	Hartford, Ct.....	Mar. 15, 1808
Washing machine.....	Leonard Kennedy....	Hartford, Ct.....	April 26, 1808
Washing machine.....	Elam King.....	Johnstown, N. Y...	May 14, 1808
Washing machine.....	Martin Lee.....	New York.....	June 4, 1808
Washing machine.....	Edward Jones.....	Alfred, Mass.....	June 28, 1808
Washing machine.....	Asahel E. Payne....	Delhi, N. Y.....	July 1, 1808
Washing machine.....	Enos Prescott.....	N. Marlbor'h, Mass.	July 11, 1808
Washing machine.....	Theron Henry.....	Bloomfield, N. Y...	July 11, 1808
Washing machine.....	Thomas Osgood.....	Charlestown, Mass.	July 11, 1808
Washing machine.....	Eben Lister.....	Killingworth, Ct...	July 11, 1808
Washing machine.....	D. Loomis and J. Mil- lington.....	Springfield, N. Y...	July 11, 1808
Washing machine.....	Stephen W. Dana....	Rutland, Va.....	Aug. 30, 1808
Washing machine.....	Separkus Tucker....	Dublin, Pa.....	Jan. 12, 1809
Washing machine.....	Eli F. Hill.....	Fabius, N. Y.....	Feb. 11, 1809
Washing machine.....	Aziel Blodget.....	Amherst, N. H.....	Feb. 16, 1809
Washing machine.....	Joseph Yarwood....	New Brunswick, N.J.	Mar. 11, 1809
Washing machine.....	Levi Anderson.....	Bristol, Pa.....	Mar. 23, 1809
Washing machine.....	William Buckman....	Annapolis, Md.....	Mar. 23, 1809
Washing machine.....	Garry Bishop.....	Madison, N. Y.....	April 17, 1809
Washing machine.....	Lemuel Bachelor....	Vernon, N. Y.....	April 24, 1809
Washing machine.....	Orin Chatfield.....	Burlington, N. Y...	May 15, 1809
Washing machine.....	Nich. Van Zandt....	Washington, D. C..	May 21, 1809
Washing machine.....	Martin Lee.....	Burlington, N. Y...	June 8, 1809
Washing machine.....	Isaiah Jennings....	New York.....	June 13, 1809
Washing machine.....	Thomas Pierce.....	Fishkill, N. Y.....	June 24, 1809
Washing machine.....	Timothy Freeman....	Madison co., N. Y...	June 30, 1809
Washing machine.....	Shubael Kimball....	Rhinebeck, N. Y...	Aug. 12, 1809
Washing machine.....	Rosel Phillips.....	Otsego county, N. Y.	Oct. 14, 1809
Washing machine.....	Robert Robinson....	Leesburg, Va.....	Nov. 3, 1809
Washing machine.....	Sylvester Noble.....	Hoosick, N. Y.....	Feb. 1, 1810
Washing machine.....	William Jackman....	Painsville, Ohio....	Oct. 8, 1810
Washing machine.....	Daniel Robinson....	Franklin, N. Y.....	Dec. 15, 1810
Washing machine.....	David Dungan.....	Upperville, Va.....	May 23, 1811
Washing machine.....	William Stanton....	Lynchburg, Va.....	May 12, 1812
Washing machine.....	Jos. Palmer.....	Brookfield, N. Y...	Aug. 21, 1812
Washing machine.....	Erastus Dennison....	New Lisbon, N. Y...	Dec. 30, 1812
Washing machine.....	John F. Whipple....	Easton, N. Y.....	June 10, 1813
Washing machine.....	Josiah Hotchkiss....	Woodbury, Ct.....	June 18, 1813

* Antedated February 7, 1842.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Washing machine.....	Silas Hisebeck.....	Vernon, N. Y.....	June 25, 1813
Washing machine.....	John Gray.....	Eaton, N. Y.....	Feb. 4, 1814
Washing machine.....	Eliphalet Jacques, jun.	Newburyport, Mass.	May 24, 1814
Washing machine.....	Joshua Lane.....	Homer, N. Y.....	May 15, 1815
Washing machine.....	Christian Seebold.....	New Berlin, Pa.....	Feb. 1, 1816
Washing machine.....	James Burnett.....	Providence, R. I.....	Sept. 13, 1818
Washing machine.....	Beardsly Hendryx.....	Springfield, N. Y.....	May 6, 1819
Washing machine.....	Benjamin Cox.....	Hadley, Mass.....	Aug. 15, 1820
Washing machine.....	James Barron.....	Norfolk, Va.....	Dec. 7, 1821
Washing machine.....	Pascal Cady.....	Brooklyn, Ct.....	Jan. 17, 1822
Washing machine.....	F. Goucher.....	Philadelphia, Pa.....	June 15, 1822
Washing machine.....	David Watson.....	Fayette, Me.....	Oct. 15, 1822
Washing machine.....	Isaac Leavitt.....	Tarner, Me.....	Aug. 12, 1823
Washing machine.....	Andrew Glendenning.....	Butler county, Pa.....	Sept. 25, 1823
Washing machine.....	William Cahoon.....	Winfield, N. Y.....	June 15, 1824
Washing machine.....	Eben Bewey.....	Butternuts, N. Y.....	June 24, 1824
Washing machine.....	Andrew Glendenning.....	Loudoun co., Va.....	Sept. 9, 1824
Washing machine.....	John West.....	Middletown, Ct.....	Dec. 14, 1824
Washing machine.....	Reuben Wheeler.....	Vergennes, Vt.....	Feb. 26, 1825
Washing machine.....	Moses J. Clark.....	Auburn, N. Y.....	Nov. 8, 1825
Washing machine.....	Sherburn Bostwick.....	Thompson, Ohio.....	Dec. 8, 1825
Washing machine.....	Oliver Deane.....	Walpole, Mass.....	Jan. 11, 1826
Washing machine.....	Willard Foster.....	Oswego, N. Y.....	Jan. 25, 1826
Washing machine.....	Edward Thurston.....	Burlington, Vt.....	Mar. 8, 1826
Washing machine.....	Richard V. Mudge.....	Durham, N. Y.....	April 12, 1826
Washing machine.....	John G. Philip.....	Kinderhook, N. Y.....	April 12, 1826
Washing machine.....	S. Church and H. Clark	Utica, N. Y.....	July 6, 1826
Washing machine.....	Burroughs Beach.....	New Milford, Conn.	Nov. 24, 1826
Washing machine.....	David G. Dunham.....	New Brunswick, N.J.	Dec. 7, 1826
Washing machine.....	Chester Stone.....	Middlebury, Conn.....	Feb. 17, 1827
Washing machine.....	David Beard.....	Buffalo, N. Y.....	June 27, 1827
Washing machine.....	Moses Cass.....	Caroline, N. Y.....	Aug. 29, 1827
Washing machine.....	Franklin Kelsey.....	Middletown, Conn.....	Sept. 28, 1827
Washing machine.....	Aaron Bull.....	Caroline, N. Y.....	Mar. 28, 1828
Washing machine.....	Eli W. Gibbs.....	Chenango co., N. Y.	May 1, 1828
Washing machine.....	Moses P. Parker.....	Lawville, N. Y.....	May 1, 1828
Washing machine.....	George Hancock.....	Maysville, Ky.....	May 24, 1828
Washing machine.....	Simon Willard, Jr.....	Cincinnati, Ohio.....	Aug. 2, 1828
Washing machine.....	John R. Davis.....	Hardland, N. Y.....	Sept. 2, 1828
Washing machine.....	Joseph & R. Hathaway	Pultney, N. Y.....	Sept. 5, 1828
Washing machine.....	Eben Blodgett.....	Watervleit, N. Y.....	Dec. 10, 1828
Washing machine.....	Samuel A. Bronson.....	Montrose, Pa.....	Dec. 26, 1828
Washing machine.....	Reuben Mosher.....	Galway, N. Y.....	Jan. 8, 1829
Washing machine.....	Amos Larcum.....	Watervleit, N. Y.....	Jan. 16, 1829
Washing machine.....	John Taylor.....	Dunstable, N. H.....	April 1, 1829
Washing machine.....	Stephen Hinds.....	Montrose, Pa.....	April 25, 1829
Washing machine.....	Ephraim Wheeler.....	Galway, N. Y.....	June 11, 1829
Washing machine.....	Wm. E. Arnold.....	Haddam, Ct.....	Aug. 3, 1829
Washing machine.....	George A. Stocking.....	Aurelius, N. Y.....	Sept. 10, 1829
Washing machine.....	Pinkham Mosher.....	Ballstown Spa, N.Y.	Oct. 10, 1829
Washing machine.....	H. Shively, R. S. Mc Ewen, & J. Lindsey	Fredericksburg, Ohio	Oct. 21, 1829
Washing machine.....	Eleazer Berry.....	New York.....	Nov. 12, 1829
Washing machine.....	Charles D. Wright.....	East Haddam, Ct.....	Nov. 19, 1829
Washing machine.....	Roswell Brainerd.....	Haddam, Ct.....	Nov. 23, 1829
Washing machine.....	J. T. W. Dennis.....	Painville, Ohio.....	Dec. 16, 1829
Washing machine.....	Wm. E. Arnold.....	Haddam, Ct.....	Jan. 11, 1830
Washing machine.....	Charles L. Clowes.....	Union, Va.....	Feb. 27, 1830
Washing machine.....	Hez. Thurber.....	Painted Post, N. Y.	April 22, 1830
Washing machine.....	Richard P. Clarke.....	Broad Albin, N. Y.....	April 16, 1830
Washing machine.....	Jas. M. Gates.....	Norwich, Ct.....	May 21, 1830
Washing machine.....	Andrew Kirkpatrick.....	Urbanna, Ohio.....	May 21, 1830
Washing machine.....	Enoch Walker.....	Woodburn, Pa.....	May 29, 1830
Washing machine.....	Stephen Hinds.....	Montrose, Pa.....	May 29, 1830

INVENTIONS OR DISCOVERIES:	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Washing machine.....	Robert C. Arnold....	New Haven, Ct....	June 15, 1830
Washing machine.....	Eben. Horton.....	Avon, Mass.....	June 17, 1830
Washing machine.....	Daniel Stocking.....	Scott county, N. Y..	June 25, 1830
Washing machine.....	John Freeman.....	Senate, N. Y.....	Oct. 14, 1830
Washing machine.....	W. H. Brainerd and C. B. Bulkley.....	Chatham, Conn....	Oct. 16, 1830
Washing machine.....	Gideon Lowell.....	Nunda, N. Y.....	Nov. 6, 1830
Washing machine.....	Amos T. Tenney.....	N. Woodstock, N. Y.	Nov. 23, 1830
Washing machine.....	Alvan Foote.....	Granville, Ohio.....	Dec. 7, 1830
Washing machine.....	Ebenezer Lester.....	Killingworth, Conn.	Dec. 20, 1830
Washing machine.....	Samuel Bushnell, 2d..	Saybrook, Conn.....	Dec. 20, 1831
Washing machine.....	Benjamin Hinkley....	Fayette, Maine.....	Jan. 31, 1831
Washing machine.....	M. D. Mulford.....	Bloomfield, N. Y....	April 5, 1831
Washing machine.....	John Hall.....	Hollis, N. H.....	April 20, 1831
Washing machine.....	John G. Conser.....	Miles township, Pa..	April 21, 1831
Washing machine.....	Samuel G. Jinkham....	Enfield, Mass.....	June 13, 1831
Washing machine.....	James Appleton.....	Richmond, Va.....	June 13, 1831
Washing machine.....	Nathan Hackett.....	Snow Hill, Ohio.....	Aug. 6, 1831
Washing machine.....	Webber Furbush.....	Halfowell, Maine....	Aug. 19, 1831
Washing machine.....	John Shull.....	N. Petersburg, Ohio..	Aug. 19, 1831
Washing machine.....	Jesse Barber.....	Sweden, N. Y.....	Aug. 30, 1831
Washing machine.....	Willson Gregory.....	Richmond, Va.....	Sept. 9, 1831
Washing machine.....	Miles B. Hand.....	Lockport, N. Y.....	Dec. 14, 1831
Washing machine.....	David Watson.....	Fayette, Maine.....	Dec. 23, 1831
Washing machine.....	Sylvanus Hathaway..	Massilon, Ohio.....	Feb. 13, 1832
Washing machine.....	Wm. McAll, H. H. Higgins, and R. G. Rogers.....	Athens, Ala.....	Feb. 15, 1832
Washing machine.....	D. G. Willson.....	Machias, Maine.....	April 6, 1832
Washing machine.....	Simeon Savage.....	E. Machias, Maine..	April 11, 1832
Washing machine.....	Sylvanus Minton.....	Pendleton, S. C.....	April 14, 1832
Washing machine.....	Benton P. Coston....	Philadelphia, Pa....	April 27, 1832
Washing machine.....	John S. and Ebenezer Pulsifer.....	Ipswich, Mass.....	May 21, 1832
Washing machine.....	Ezra Fisk.....	Fayette, Maine.....	May 25, 1832
Washing machine.....	Ebenezer Mayo.....	Halfowell, Maine....	May 26, 1832
Washing machine.....	Ira Avery.....	Springfield, Pa.....	June 22, 1832
Washing machine.....	Nathan Howe and James McCollum....	N. Petersburg, Ohio..	June 30, 1832
Washing machine.....	Isaac S. Wright.....	Weedsport, N. Y....	July 18, 1832
Washing machine.....	Watson W. Woodburn..	Greensburg, N. C....	July 18, 1832
Washing machine.....	William H. Cumming..	Guilford co., N. C..	Nov. 3, 1832
Washing machine.....	Eli Nickolls.....	Union t'nship, Ohio..	Nov. 24, 1832
Washing machine.....	Jacob Lindsey.....	Canajoharie, N. Y..	Dec. 28, 1832
Washing machine.....	Eaton Wilber.....	Sullivan, N. Y.....	Jan. 11, 1833
Washing machine.....	Larkin Smith.....	Guilford co., N. C..	April 25, 1833
Washing machine.....	James B. Dunkin.....	Union, Va.....	May 15, 1833
Washing machine.....	Benjamin Hinkley....	Fayette, Maine.....	July 23, 1833
Washing machine.....	George W. Willson....	Dunstable, N. H.....	Aug. 7, 1833
Washing machine.....	Samuel Swett, jr.....	Readfield, Maine....	Sept. 18, 1833
Washing machine.....	Andrew Glendenning..	Frankfort, Ind.....	Nov. 19, 1833
Washing machine.....	W. Miller & E. Rogers	Connersville, Ind....	Jan. 17, 1834
Washing machine.....	Uriah L. Clarke.....	Manot township, Pa..	Feb. 6, 1834
Washing machine.....	Jonathan Chase.....	Waterborough, Me....	June 23, 1834
Washing machine.....	Jesse Gilman.....	Waterborough, Me....	July 14, 1834
Washing machine.....	Avery B. Gates.....	Connersville, Maine..	Aug. 1, 1834
Washing machine.....	John D. Gwinh.....	Washington co., Te..	Oct. 3, 1834
Washing machine.....	Alanson D. Lord.....	Bethany, N. Y.....	Nov. 24, 1834
Washing machine.....	William C. Kniffen....	Alexander, N. Y....	Dec. 17, 1834
Washing machine.....	Stillman Roberts.....	Portland, Maine.....	Jan. 16, 1835
Washing machine.....	Amos C. Haniford.....	Northfield, N. H....	Feb. 6, 1835
Washing machine.....	Stephen A. McGeorge..	Alexander, N. Y....	Mar. 24, 1835
Washing machine.....	Ezra Whitman, jr., as- sistee of Ezra Whitman	Winthrop, Maine....	Mar. 27, 1835

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WASB. DATED.
Washing machine.	John Snyder, jr.	New York.	May 2, 1896
Washing machine.	Phil Hunt.	Litchfield, Conn.	May 2, 1896
Washing machine.	Jacob Sager.	Harrisonburg, Va.	May 2, 1896
Washing machine.	John T. Denniston.	Alexander, N. Y.	May 22, 1896
Washing machine.	A. W. Soule.	Portland, Maine.	July 18, 1896
Washing machine.	David Warren.	Winthrop, Maine.	Aug. 27, 1896
Washing machine.	Wm. and J. D. Collins.	Norwich, Conn.	Aug. 27, 1896
Washing machine.	James Lombard.	Readfield, Maine.	Sept. 9, 1896
Washing machine.	J. J. and E. C. Milliken.	Winthrop, Maine.	Sept. 26, 1896
Washing machine.	John Q. Geer.	Norwich, Conn.	Oct. 10, 1896
Washing machine.	Henry Auk.	Philadelphia, Pa.	Oct. 14, 1896
Washing machine.	Isaac Spicer.	Norwich, Conn.	Oct. 17, 1896
Washing machine.	Joab H. Hubbard.	Bloomfield, Conn.	Jan. 6, 1896
Washing machine.	Luther Davis.	Norwich, Conn.	Feb. 12, 1896
Washing machine.	John S. Geer.	Norwich, Conn.	Mar. 2, 1896
Washing machine.	Albion P. Arnold.	Readfield, Maine.	Mar. 12, 1896
Washing machine.	E. Y. Watson.	Albany, N. Y.	Mar. 23, 1896
Washing machine.	Charles Merriman.	Middletown, Conn.	April 21, 1896
Washing machine.	Henry Souder.	Strasburg, Pa.	April 21, 1896
Washing machine.	L. R. Prince.	Beverly, Mass.	May 14, 1896
Washing machine.	Amory Davidson.	Littleton, Mass.	June 11, 1896
Washing machine.	Amos Larcum.	Troy, N. Y.	June 16, 1896
Washing machine.	William Newton.	Warren county, Ohio.	July 1, 1896
Washing machine.	James H. Little.	Skaneateles, N. Y.	July 2, 1896
Washing machine.	William Hovey.	Worcester, Mass.	Feb. 4, 1897
Washing machine.	Robert W. Oliphant.	N'th Granville, N. Y.	June 7, 1896
Washing machine.	Robert Patton.	Columbia, Pa.	June 13, 1896
Washing machine.	Samuel Swett, jr.	Portsmouth, N. H.	July 18, 1896
Washing machine.	Isaac Leavitt, Adnah Gilmore, and William Sturtevant.	Turner, Maine.	Aug. 8, 1899
Washing machine.	Sewall Benson.	Waterville, Maine.	May 25, 1840
Washing machine.	George Waterman.	Johnston, R. I.	May 11, 1841
Washing machine.	Horatio N. Walter.	Norwich, N. Y.	June 22, 1841
Washing machine.	Leonard Procter.	New York.	Nov. 16, 1841
Washing machine.	Frederick Featris.	Guliford, N. C.	Dec. 12, 1842
Washing machine*.	John Shugert.	Elizabeth, N. J.	May 18, 1843
Washing machine†.	Joseph C. Rich.	Penfield, N. Y.	Oct. 12, 1843
Washing machine.	James Hutchinson.	Martinsburg, Va.	Oct. 28, 1843
Washing machine.	Arthur Mitchell.	Aberdeen, Ohio.	Nov. 6, 1843
Washing machine.	James B. Coffin.	Big Prairie, Ohio.	Feb. 2, 1844
Washing machine.	Ephraim Lukens.	Baltimore, Md.	Mar. 9, 1844
Washing machine.	Lewis Woodward.	Medford, N. J.	April 4, 1844
Washing machine.	William Newbrough.	Wooster, Ohio.	April 17, 1844
Washing machine.	William Soule.	Stafford, Conn.	May 17, 1844
Washing machine.	Oliver B. Wight.	Sturbridge, Mass.	July 9, 1844
Washing machine.	William E. Arpeid.	Rochester, N. Y.	July 13, 1844
Washing machine.	David Kaufman.	Mohecanville, Ohio.	Aug. 21, 1844
Washing machine.	Nathan Parish.	Rush, N. Y.	Dec. 4, 1844
Washing machine.	Harrison Hagans.	Brandonsville, Va.	July 5, 1845
Washing machine.	Bentzen & Zimmerman.	Petersburg, Va.	Aug. 26, 1845
Washing machine.	Horatio Hoskins.	Scipio, N. Y.	Aug. 26, 1845
Washing machine.	Gray Uley.	Chapel Hill, N. C.	Nov. 26, 1845
Washing machine.	Charles King.	Scipio, N. Y.	Jan. 28, 1846
Washing machine.	Aldrich & Foote.	Rushville, N. Y.	Feb. 10, 1846
Washing machine.	John Greenleaf.	North Yarmouth, Me.	July 24, 1846
Washing machine.	H. B. Masser.	Sunbury, Pa.	Oct. 7, 1846
Washing machine.	Ira Avery.	Tunkhannock, Pa.	Nov. 12, 1846
Washing machine.	Edwin D. Wilson.	Phillippa, Pa.	Dec. 15, 1846
Washing machine.	Edward D. Tippet.	Georgetown, D. C.	Dec. 17, 1846
Washing machine and clothes press.	Jonathan Read.	New York.	April 10, 1829
Washing machine, and churn.	Thomas Beatty.	Hudson, N. Y.	April 25, 1807
Washing machine, and churn.	Stephen Winchester.	Newtown, Conn.	Aug. 21, 1808
Washing machine, and churn.	Garry Bishop.	Cazenovia, N. Y.	Sept. 7, 1808

* Antedated May 1, 1843.

† Antedated April 3, 1843.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Washing machine, and churn...	Gardner Osgood.....	Madison co., N. Y...	June 7, 1899
Washing machine, and churn...	Jesse Roberts.....	Germantown, Pa...	April 25, 1810
Washing machine, and churn...	Zini Phinney.....	Cairo, N. Y.....	June 19, 1812
Washing machine, and churn...	Thomas Beatty.....	Hudson, N. Y.....	April 5, 1837
Washing machine, and churn...	Rufus R. Palmer.....	Caroline, N. Y.....	Mar. 21, 1838
Washing machine, and churn...	John Grout.....	Caroline, N. Y.....	Oct. 10, 1838
Washing machine, and churn...	Freedus Reed.....	Pike township, Pa...	June 11, 1839
Washing machine, and churn...	Joel B. Pratt.....	Milo, N. Y.....	July 14, 1839
Washing machine, and churn...	George B. Gibbs.....	Le Raysville, N. Y.	Oct. 10, 1839
Washing machine, and churn...	John White.....	South Union, Ky...	April 11, 1831
Washing machine, and churn...	Oliver H. Brooks...	E. Bethel, Vt.....	Mar. 11, 1833
Washing machine, and churn...	Naham Swett.....	Readfield, Maine...	Dec. 24, 1834
Washing machine, and churn...	Mitchell and Fairbanks	Readfield, Maine...	May 9, 1835
Washing machine, and churning.	Harvey W. Sabine...	Rushville, N. Y...	Aug. 16, 1845
Washing machine, and drying...	Thomas Pearce.....	Hartwick, N. Y.....	Dec. 29, 1832
Washing machine, and fulling...	Bohan Dewey.....	Milton t'nship, Ohio	Nov. 19, 1833
Washing machine, and fulling...	Orin D. Wade.....	China, N. Y.....	Sept. 9, 1835
Washing machine, and grinding.	James Justin.....	Pittsburg, Pa.....	April 19, 1832
Washing machine, and heating water.....	Enos D. Cherry.....	Auburn, N. Y.....	Sept. 10, 1839
Washing machine, and heating water.....	James Luckey.....	Troy, N. Y.....	Nov. 19, 1831
Washing machine, and press....	Amos Hosford and E. Kelsey.....	Berlin, Conn.....	June 27, 1809
Washing machine, and press....	Henry Averill.....	Richland, N. Y.....	Aug. 14, 1828
Washing machine, and press....	John Newhall.....	Dayton, Ohio.....	June 13, 1831
Washing machine, revolving....	Philip Honney.....	Randolph co., N. C.	April 21, 1834
Washing machine, rotary.....	Calvin Post.....	Springport, N. Y...	July 15, 1838
Washing machine, and scouring.	Isaac Loofborrow...	New York.....	June 26, 1810
Washing machine, and scouring.	John Goulding.....	Dedham, Mass.....	Aug. 24, 1837
Washing machine, and scouring.	N. Morrison and John Lewis.....	Uniontown, Pa.....	Mar. 14, 1832
Washing machine, and scouring.	Caram Moore.....	Guilford co., N. C.	Oct. 30, 1832
Washing machine, steam.....	James Trueman.....	Philadelphia, Pa...	Aug. 21, 1812
Washing machine, steam.....	Junius Smith.....	London, England...	Jan. 28, 1826
Washing machine, steam.....	William Burton, jr...	Aimesville, N. Y...	Aug. 16, 1826
Washing machine, steam.....	L. Barney and A. A. Beach.....	Groton, N. Y.....	Feb. 5, 1830
Washing machine, steam, revolving washer.....	James Barnes.....	Kingston, Pa.....	Oct. 14, 1830
Washing machine, and shelling corn.....	Benjamin Rice.....	Denmark, N. Y.....	Nov. 23, 1827
Washing machine, vibrating....	Samuel Silliman.....	Saybrook, Conn....	Feb. 3, 1830
Washstand.....	John Williams.....	Baltimore, Md.....	Mar. 15, 1838
Washstand.....	Ezra Ripley.....	Schenectady, N. Y.	Dec. 27, 1833
Watercloset, portable.....	Edward Robinson...	New York.....	Nov. 9, 1833
Watercloset, portable.....	James Stone.....	New York.....	Mar. 11, 1835
Water guard, for doors.....	John Burt, jr.....	Tiverton, R. I.....	Jan. 24, 1834
Water guard, for doors.....	Dan. Bulkley.....	Hampton, Conn....	June 14, 1834
Water, pressing from clothes...	David Angevine.....	City of New York...	Feb. 25, 1836
Window, cleaning.....	Thomas Bruff.....	Washington, D. C.	July 24, 1807
Window curtain, screws, and key	H. Andrew.....	New York.....	Mar. 6, 1822
Window curtain, and bed.....	Samuel Abbott and J. Prentiss.....	Chester, Mass.....	Aug. 23, 1825
Window shades.....	Rufus Conant.....	Lyme, N. H.....	Sept. 9, 1825
Window shades, &c., rolling up..	Henry Lamson.....	Boston, Mass.....	July 17, 1835
Writing desk.....	Seth Luther.....	Boston, Mass.....	June 19, 1838
Writing desk and table combined*	John White.....	Marshall, Mich....	Nov. 1, 1845

* Antedated July 18, 1845.

CLASS No. XVIII.

ARTS, POLITE,

FINE, AND ORNAMENTAL,

**Including Music, Painting, Sculpture, Engraving, Books,
Paper, Printing, Binding, Jewelry, &c.**

LIST OF PATENTS.

CLASS XVIII.—ARTS, POLITE, FINE, AND ORNAMENTAL, including Music, Painting, Sculpture, Engraving, Books, Paper, Printing, Binding, Jewelry, &c.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Accordeons, tuning reeds of	M. & Nicklaus Schneider	New Orleans, La.	Sept. 27, 1845
Armlets.	Edward West	Kentucky	May 19, 1800
Ball stocks, printers'	John Babcock	New Haven, Ct.	Mar. 18, 1818
Bank notes.	George Murray	Philadelphia, Pa.	Mar. 23, 1822
Bank notes.	James Puglia	Philadelphia, Pa.	Aug. 13, 1822
Bank notes, preventing counterfeits	Francis Peabody and Joseph Dixon	Salem, Mass.	April 20, 1832
Bills of credit.	John Golder	Philadelphia, Pa.	Sept. 26, 1835
Bills of exchange.	Charles C. Wright	New York	June 19, 1835
Binder, for newspapers	Ezra Ripley	Troy, N. Y.	Dec. 26, 1837
Binding, ornamental and raised	D. K. Vanreckton	New York	Dec. 12, 1820
Biting figures on steel cylinders, for printing calico.	David H. Mason and M. H. Baldwin	Philadelphia, Pa.	Oct. 30, 1827
Block letters, making.	Lewis Katzen	New York, N. Y.	Sept. 20, 1844
Blocks, for printing colors on silk.	John Crabtree	New York	Dec. 7, 1837
Block printing on woven fabrics of cotton*	Robert Hampson	Manchester, Gr. Brit.	June 7, 1841
Blocks, stereotype.	Bradbury Haskett	Boston, Mass.	May 21, 1832
Blocks, stereotype.	Samuel Sawyer	Boston, Mass.	May 28, 1832
Blocks, stereotype.	Enoch Hale	Boston, Mass.	Feb. 15, 1833
Blocks, stereotype, extendible	Elihu White, assignee of G. W. Grater	New York	Jan. 7, 1831
Blocks, stereotype, fastening, cam and spring	Abel Chandler	Concord, Mass.	July 13, 1832
Blocks, stereotype plates.	Bradbury Haskett	Boston, Mass.	Mar. 8, 1831
Blocks, stereotype, used in printing	Matthew Smith	New York	Jan. 20, 1819
Blocks, stereotype, used in printing	Samuel G. Goodrich	Boston, Mass.	Oct. 11, 1828
Books, backing, machine for.	William Loughton	Portsmouth, N. H.	Jan. 10, 1845
Books, binders' boards, cutting.	Geo. S. Scofield	Philadelphia, Pa.	June 16, 1846
Bookbinder's press.	John J. Wells	Hartford, Ct.	Mar. 23, 1824
Book-binding.	John T. Sutherland	Philadelphia, Pa.	July 27, 1812
Book-binding.	John Meer	Philadelphia, Pa.	Aug. 26, 1818
Book-binding.	Jesse Torrey	Germantown, Pa.	Aug. 8, 1829
Book-binding.	Wm. Hancock	Great Britain	Oct. 28, 1837
Book-binding, extra, moveable case for.	Robert De Silver	Philadelphia, Pa.	Sept. 14, 1812
Book-binding.	David Felt	New York, N. Y.	Aug. 1, 1838
Books, cutting.	Archibald O. Douglass	Philadelphia, Pa.	Jan. 6, 1832
Brushes, for blending colors	George M. Morris	Philadelphia, Pa.	Mar. 6, 1835
Bugle, kent.	Richard Willis	West Point, N. Y.	Nov. 10, 1827
Bugles, keyed, of turtle shell	George W. Shaw	Thompson, Conn.	Aug. 4, 1845
Bust of hon. J. C. Calhoun, design	Clark Mills	Charleston, S. C.	Oct. 7, 1845
Bust of Robert Burns, design	J. C. King	Boston, Mass.	Jan. 31, 1844
Calendars.	John O. Hara, assignee of John L. Dagg	Philadelphia, Pa.	May 4, 1830
Cards, machine for dealing	Robert Bailey	Washington, D. C.	May 15, 1812
Chains, watch	Samuel Keplinger	Baltimore, Md.	May 4, 1820
Chains, watch	John Hatch	Baltimore, Md.	June 5, 1820
Checks, blanks for	James Atwater	New Haven, Ct.	Jan. 21, 1829
Checks, blanks for	James Atwater and N. & S. S. Jocelyn	New Haven, Ct.	June 11, 1829

* Antedated June 9, 1840.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Checks, blanks for	James Atwater	New Haven, Ct.	Aug. 18, 1839
Checks, preventing forgeries	John D. Pope	Baltimore, Md.	Mar. 8, 1834
Child's whistle, design	Henry Dubosq	Philadelphia, Penn.	May 6, 1844
Coloring maps, process	Lucius Stebbins	Hartford, Conn.	July 11, 1837
Colors, imprinting	Lewis J. B. Wells	Philadelphia, Pa.	Jan. 24, 1817
Coloring maps, mode of*	Lucius Stebbins	Hartford, Ct.	Mar. 12, 1840
Copy books, method of binding ..	William Davison	Baltimore, Md.	Oct. 9, 1841
Copying machine	Cephas Thompson	Bristol, R. I.	Feb. 5, 1866
Counterfeit figure, lathe to prevent	David H. Mason	Philadelphia, Pa.	June 7, 1832
Counterfeit, mode of engraving to			
prevent	George Murray	Philadelphia, Pa.	Feb. 13, 1810
Counterfeit, mode of preventing ..	Jac. Perkins	Boston, Mass.	June 16, 1810
Counterfeit notes, detecting	Jac. Perkins	Massachusetts.	Mar. 19, 1799
Counterfeit notes, protecting	Eleazer Watson	Albany, N. Y.	Aug. 3, 1838
Counterfeit preventing	John Kneass		April 28, 1815
Counterfeit, preventing	Abel Brewster	Hartford, Ct.	July 15, 1816
Counterfeit, preventing	Richard Wilcox	New York.	Sept. 19, 1823
Counterfeit, preventing	Nathaniel Sylvester ..	New York.	July 12, 1824
Cutting press, bookbinder's	Chas. Stimpson, jr.	Boston, Mass.	Oct. 17, 1831
Cutting press, for paper	Benj. Morris	Oxford, N. Y.	Feb. 15, 1835
Daguerreotype impressions, mode	Benjamin R. Stevens &		
of fixing	Lemuel Morse	Lowell, Mass.	Mar. 28, 1842
Daguerreotype miniatures, improv-			
ed method of finishing	William A. Pratt	Alexandria, D. C.	Mar. 14, 1846
Daguerreotype pictures, coloring ..	John Plumbe, jr. ass'e		
	of Daniel Davis, jr.	Boston, Mass.	Oct. 22, 1842
Daguerreotype pictures, coloring ..	Montgo'ry P. Simons,		
	assignee of Warren		
	Thompson	Philadelphia, Pa.	May 12, 1843
Daguerreotype pictures, improve-	Fred. Langenheim, as-		
ment in coloring	signee of J. B. Isen-		
	ring, Switzerland	Philadelphia, Pa.	Jan. 30, 1846
Daguerreotype plates, coloring ...	Fred. Langenheim	Philadelphia, Pa.	Jan. 30, 1846
Delineator, for fac similes	Jonas Wickes	New York.	Sept. 9, 1825
Diamonds, setting	John Dickinson	Philadelphia, Pa.	Nov. 30, 1832
Dies, improvement on Perkin s ..	Jac. Perkins and G.	Newburyport, Mass.	
	Murray	& Philadelphia, Pa.	June 25, 1813
Dies, substitute for etching	Abel Brewster	Frankfort, Pa.	July 15, 1813
Divitials, and preventing forgeries	C. S. Rafinesque	Lexington, Ky.	Aug. 23, 1825
Drawing, instruments for	Erastus W. Ellsworth ..	East Windeor, Conn	June 7, 1845
Drawings, machine for making			
perspective	Richard Lyons	New Rumley, Ohio ..	June 14, 1834
Drawing, mechanical, perspective.	Simeon De Witt	Albany, N. Y.	April 30, 1813
Engraving	Isaac Hutton and G.		
	Fairman	New York.	Jan. 8, 1802
Engraving, machine for	Ethan Allen	Grafton, Mass.	Jan. 16, 1843
Engraving and printing, metallic			
plates	David H. Mason	Philadelphia, Pa.	May 17, 1832
Etching end pieces of bank notes.	Henry Tanner	Philadelphia, Pa.	July 1, 1815
Files, for papers	Samuel Angell	Providence, R. I.	April 22, 1834
Files for filing papers, screw-nuts			
applied	William Mann	Philadelphia, Pa.	July 3, 1840
Files or ready binders for filing			
pamphlets	Isaac Detteler	Philadelphia, Pa.	May 22, 1841
Flute, German	William Schaffer	New York.	June 6, 1814
Gilding, silvering, in dead colors..	Daniel Davis	Boston, Mass.	Mar. 21, 1843
Glass frames for pictures	John Scott	Philadelphia, Pa.	April 6, 1831
Globe, for teaching geography	Elizabeth Oram	New York.	Jan. 12, 1831
Grammar, teaching	John Lamb	Hillsdale, N. Y.	July 29, 1830
Grammatical key	James Brown	Newark, N. J.	Nov. 3, 1817
Grammatical mirror	Cyrus Durand	Springfield, N. J.	Mar. 17, 1818
Gilding copper, brass	George Richards	Birmingham, Engl'd	May 17, 1838
Guitar	E. N. Sherr	Philadelphia, Pa.	Oct. 6, 1831
Harmonicon	Francis H. Smith	Northampton, Va. ..	April 7, 1825

* Additional improvement, Sept. 4, 1840, and June 16, 1846.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Impressions upon metals.....	L. C. Ives, assignee of Waterm'n L. Ormsby	Bristol, Ct., and New York.....	Feb. 24, 1842
Ink, applying to types.....	John Prince.....	Philadelphia, Pa.....	Nov. 19, 1833
Ink, coloring matter.....	James Rennie.....	Lodi, N. Y.....	June 9, 1834
Ink, distributor.....	John Prince.....	New York.....	Dec. 3, 1829
Ink, distributor, self-operating.....	John Maxson.....	Schenectady, N. Y.....	Jan. 9, 1835
Ink, distributing cylinder, for copper plates.....	Andrew Maverick.....	New York.....	April 17, 1810
Ink, distributing on types, roller for ink holder.....	Hugh Maxwell.....	Lancaster, Pa.....	Dec. 26, 1817
Inkstand.....	Dan'l Harrington.....	Philadelphia, Pa.....	April 22, 1831
Inkstand.....	Oliver Barber.....	Hartford, Ct.....	May 13, 1813
Inkstand.....	Anson Hawood.....	Easton, Mass.....	Nov. 23, 1818
Inkstand.....	Ezra Southworth.....	Saybrook, Ct.....	June 29, 1833
Inkstand*.....	George Burnham.....	Philadelphia, Pa.....	Dec. 30, 1841
Inkstand.....	A. T. Arrowsmith, assignee of W. Hunt.....	New York.....	May 29, 1845
Inkstand.....	A. T. Arrowsmith, assignee of Walter Hunt	New York.....	Oct. 7, 1845
Inkstand.....	Geo. Arrowsmith, assignee of Walter Hunt	New York.....	Dec. 11, 1845
Inkstand†.....	Daniel Harrington.....	Philadelphia, Pa.....	Nov. 8, 1845
Inkstand, Capillary wick.....	Isaac M. Moss, assignee of John Farley.....	Philadelphia, Pa.....	Nov. 8, 1845
Inkstands, manufacture of.....	Washington, D. C.....	Washington, D. C.....	Jan. 30, 1841
Inkstand, stone.....	D. J. Mandell.....	Springfield, Mass.....	Feb. 21, 1842
Ink, supplying to the pens of paper ruling machines.....	Abm. H. Quincy.....	Boston, Mass.....	Sept. 3, 1832
Inking apparatus, gravitating.....	Lewis Edwards.....	Norwich, Ct.....	Aug. 31, 1839
Inking apparatus, of Neel's printing press.....	Wm. I. Stone.....	Washington, D. C.....	Oct. 20, 1829
Inking distributor.....	Richard Wood.....	New York.....	Nov. 4, 1830
Inking distributor, self-moving†.....	John Prince.....	New York.....	Dec. 3, 1831
Inking form of types.....	John Prince.....	New York.....	April 23, 1830
Inking ivory, machine for.....	Samuel Fairland.....	Philadelphia, Pa.....	Oct. 25, 1830
Inking machine, self, for hand printing press.....	L. Pratt & F. Bush.....	Meriden, Ct.....	Aug. 28, 1821
Inking machine, for inking types.....	William J. Spence.....	New York.....	April 30, 1834
Inking rollers.....	Samuel Fairland and John Gilpin.....	New York.....	Mar. 27, 1835
Inking rollers, temperature of.....	Richard M. Hoe.....	New York, N. Y.....	April 17, 1844
Inking type, machine for||.....	Eliphaz W. Arnold.....	Boston, Mass.....	Sept. 21, 1837
Instructor, self.....	Frederick J. Austin.....	New York.....	Feb. 20, 1841
Keys, for musical instruments.....	Charles Varle.....	Baltimore, Md.....	May 20, 1830
Keys, watch.....	Edward C. Riley.....	New York.....	Aug. 22, 1833
Leaf holders.....	Joseph S. Davis.....	Providence, R. I.....	April 3, 1827
Lektography.....	Joseph Nock.....	Washington, D. C.....	Aug. 10, 1843
Letters and figures, metallic.....	James B. Manning.....	Gloucester, Mass.....	Feb. 16, 1829
Letters, making, shaded.....	Lewis Child.....	New York.....	Oct. 4, 1817
Likenesses, concave reflector and plate, taking.....	Geo. Bruce.....	New York.....	April 4, 1820
Lithography.....	Alexander S. Wolcott.....	New York.....	May 8, 1840
Lithography, applied to reprinting books.....	David Henderson.....	Jersey City, N. J.....	Sept. 17, 1824
Manifold letter writers.....	Robert C. Manners.....	Boston, Mass.....	Feb. 15, 1833
Marking and lettering packages.....	Jesse K. Park.....	New York, N. Y.....	Nov. 13, 1844
Marble, preparing for painting.....	Wm. Francis & Wm. Johnson.....	Waynesville, N. C.....	Oct. 3, 1844
Medallion bust of Theodore Frelinghuysen§.....	Archd. Robertson.....	New York.....	Mar. 5, 1804
Metallic reeds, method of tuning.....	J. G. Wellstead, assignee of S. Ellis.....	New York.....	Sept. 27, 1844
Music.....	J. Shaler Ives.....	New York, N. Y.....	May 9, 1846
Music, arranging, printed books.....	Nicholas A. Lee.....	New York.....	June 11, 1818
Music, notes.....	Moses Elliot.....	Boscawen, N. H.....	June 9, 1818
Music, teaching.....	William C. Phillips.....	Lunenburg, Va.....	June 18, 1829
	George Geib.....	New York.....	Aug. 30, 1819

* Additional improvement, Nov. 28, 1842.

† Antedated Sept. 2, 1845.

‡ Reissued Nov. 19, 1833.

§ Additional improvement, Oct. 12, 1842.

¶ Antedated Aug. 12, 1844.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Music, teaching, "meterome accenting".....	Uri Emmons.....	New York.....	April 7, 1831
Musical instruments.....	John I. Hawkins....	Pennsylvania.....	Oct. 24, 1806
Musical instruments, applying wind to.	Peter L. Grosh and George Grosh.....	Lancaster, Pa.....	April 8, 1833
Musical instruments, producing a swell.....	Charles Pommer.....	Philadelphia, Pa....	Aug. 30, 1819
Musical instruments, bellows for.	Jeremiah Cahart....	Buffalo, N. Y.....	Dec. 28, 1846
Music, writing.....	Thomas Harrison....	Springfield, Ohio...	Oct. 26, 1839
Organs.....	Aaron M. Peasley...	Boston, Mass.....	Nov. 11, 1818
Organs.....	John Meads.....	Albany, N. Y.....	Nov. 25, 1838
Organs, seraphina.....	Louis Zwahlen.....	New York.....	May 5, 1832
Organ, vocal.....	John W. Campbell...	Attica, Indiana.....	Nov. 26, 1840
Ornamental borders, casting.....	Jos. S. Lewis.....	New York.....	Oct. 8, 1824
Ornamental rolls and stamps, for bookbinders.....	David H. Mason....	Philadelphia, Pa....	Jan. 26, 1826
Ornamenting columns.....	Cyrus Durand.....	Springfield, N. J....	Sept. 22, 1818
Ornamenting columns, chairs.....	Robert Thompson...	Washington, Ohio...	Oct. 1, 1830
Ornamenting, gilding, &c., with types.....	Francis Bailey.....	Philadelphia, Pa....	Oct. 1, 1816
Ornamenting the top of iron and other railing.....	Paulus Hedly.....	New York.....	Feb. 21, 1822
Ornamenting walls and ceilings.....	William West.....	Philadelphia, Pa....	May 20, 1826
Ornaments from anthracite coal.	Josiah W. Kirk.....	Schuylkill co., Pa...	June 13, 1831
Painting, elastic stamp, ornamenting walls.....	Thomas Boynton....	Windsor, Vt.....	July 12, 1832
Painting, fret.....	John Mackay.....	New York.....	May 28, 1818
Painting rooms.....	John Selby.....	New York.....	Dec. 30, 1803
Pen case.....	A. G. Bagley.....	New York, N. Y....	Jan. 6, 1846
Pen, double.....	Mark J. Brunell....	New York.....	Jan. 17, 1799
Pen, flying.....	Lewis M. Desprauqh	New York.....	June 29, 1818
Pen, fountain.....	Douglass Hyde.....	Reading, Pa.....	May 20, 1830
Pen, fountain.....	William Davison....	Baltimore, Md.....	Oct. 9, 1841
Pen, fountain.....	Nelson Bartlett....	Canajoharie, N. Y...	Sept. 9, 1843
Pen, fountain, self-supplying.....	Marcus T. C. Gould	Philadelphia, Pa....	Oct. 1, 1830
Penholder.....	William Fife.....	Philadelphia, Pa....	Sept. 28, 1839
Penholders.....	Albert Alden.....	Barre, Mass.....	Mar. 4, 1843
Penholders.....	Daniel Harrington..	Philadelphia, Pa....	Sept. 2, 1845
Pen, instrument for holding.....	Henry Smith.....	Georgetown, D. C...	Jan. 15, 1818
Pen, metallic, writing.....	Peregrine Williamson	Baltimore, Md.....	Nov. 22, 1809
Pen, metallic.....	Peregrine Williamson	New York.....	Mar. 30, 1835
Pen, metallic*.....	Henry C. Windle, Joseph Gillot, and Stephen Morris.....	England.....	Mar. 21, 1836
Pens, metallic.....	Thomas Woodward..	Brooklyn, N. Y....	Dec. 1, 1842
Pens, metallic.....	Timothy Alden.....	Barre, Mass.....	Dec. 12, 1842
Pen, microscopic.....	John Bennett.....	Lowell, Mass.....	Oct. 11, 1828
Pen, self-supplying.....	Charles Cleveland...	Middleburg, Vt.....	Dec. 16, 1833
Pen, spring ruler.....	Thomas M. Pomeroy & Lemuel Hedge....	Windsor, Vt.....	June 21, 1815
Pens, steel writing.....	David Thomas.....	Hingham, Mass....	July 3, 1840
Pencil cases.....	George W. Simons..	Philadelphia, Pa....	Nov. 18, 1844
Pencil case, ever pointed.....	Joseph Saxton.....	Philadelphia, Pa....	April 11, 1829
Pencil case, ever pointed.....	William Jackson....	Philadelphia, Pa....	July 27, 1829
Pencil case, ever pointed.....	John Hague.....	New York, N. Y....	Aug. 16, 1839
Pencil case, ever pointed.....	J. Stockman and S. L. Hopper, assignees of G. W. Simons.....	Philadelphia, Pa....	Oct. 12, 1839
Pencil case, ever pointed.....	Thomas Woodward..	Brooklyn, N. Y....	June 10, 1840
Pencil case, ever pointed.....	Thomas Woodward..	Brooklyn, N. Y....	Oct. 14, 1840
Pencil case and pen.....	Henry Withers.....	New York city.....	Mar. 19, 1836
Pencil case and pen.....	Thomas Addison....	New York city.....	May 10, 1836
Pencil, ever-pointed, open case.....	Jacob J. Lownds....	Philadelphia, Pa....	Sept. 22, 1826
Pencil, ever-pointed, lead.....	Elwood Meeds.....	Philadelphia, Pa....	June 26, 1836

* Antedated September 21, 1837.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Pencils, ever-pointed.....	A. G. Bagley, assignee of John Durant....	New York, N. Y....	June 27, 1846
Pencils, ever-pointed.....	A. G. Bagley.....	New York, N. Y....	Nov. 6, 1846
Pencils, lead, self-feeding, ever- pointed.....	James Boss.....	Philadelphia, Pa....	July 20, 1846
Pencil, metallic slides and cases for ever-pointed.....	James Bogardus.....	New York.....	Sept. 17, 1833
Pencil and pen combined.....	Jacob J. Hatcher....	Philadelphia, Pa....	Nov. 6, 1846
Pencil points, making, and com- position.....	Guy G. Baldwin.....	Ticonderoga, N. Y..	Dec. 2, 1835
Pencils, tailors' marking.....	William Coover.....	Erie, Pa.....	Aug. 26, 1843
Piano, chromametro, for tuning.....	Peter Pelúnos.....	Philadelphia, Pa....	Mar. 3, 1820
Piano, compensating tubes.....	Thomas Loud.....	Philadelphia, Pa....	July 7, 1835
Piano forte.....	Jas. S. McLean.....	New Jersey.....	May 27, 1796
Piano forte.....	John J. Hawkins.....	Pennsylvania.....	Feb. 12, 1800
Piano forte.....	Ralph Shaw.....	Boston, Mass.....	July 2, 1806
Piano forte.....	George Charters.....	New York.....	July 8, 1815
Piano forte.....	John Geib.....	New York.....	Oct. 3, 1817
Piano forte.....	Jas. A. Gutwaldt....	New York.....	Aug. 27, 1818
Piano forte.....	Alpheus Babcock....	Boston, Mass.....	Dec. 17, 1825
Piano forte.....	C. F. L. Albrecht....	Philadelphia, Pa....	Mar. 18, 1828
Piano forte.....	Charles S. Sackmeister	New York.....	May 17, 1830
Piano forte.....	Charles P. Seabury..	New York.....	May 20, 1830
Piano forte.....	Thomas Kearsing, H. O. Kearsing, G. T. Kearsing, and Wm. F. Kearsing.....	New York.....	June 13, 1831
Piano forte.....	Louis Fiasore.....	Baltimore, Md.....	July 22, 1833
Piano forte.....	John Pethick.....	Mount Morris, N. Y.	Feb. 12, 1836
Piano forte.....	Isaac Clark.....	Cincinnati, Ohio...	Mar. 2, 1836
Piano forte.....	H. Hartye.....	Baltimore, Md.....	Mar. 12, 1836
Piano forte*.....	Edwin Brown.....	Boston, Mass.....	Nov. 20, 1838
Piano forte.....	William Cumston....	Boston, Mass.....	Aug. 3, 1839
Piano forte.....	Jonas Chickering, Jno. Mackay and William H. Mackay, assignees of Alpheus Babcock	Boston, Mass.....	Oct. 31, 1839
Piano forte.....	Jonas Chickering....	Boston, Mass.....	Oct. 8, 1840
Piano forte.....	Lemuel Gilbert.....	Boston, Mass.....	July 10, 1841
Piano forte.....	Daniel B. Newhall...	Boston, Mass.....	Nov. 3, 1841
Piano forte.....	Charles Bossert and John Shoemaker....	Philadelphia, Pa....	April 29, 1842
Piano forte.....	Edwin Brown.....	Boston, Mass.....	Jan. 27, 1843
Piano forte.....	Geo. Hews & Richard C. Marsh.....	Boston, Mass.....	April 10, 1843
	Nathaniel W. Tileston	Dorchester, Mass. }	
Piano forte.....	Jonas Chickering....	Boston, Mass.....	Sept. 1, 1843
Piano forte.....	Obed M. Coleman....	Philadelphia, Pa....	April 17, 1844
Piano forte.....	Loving Ricketts....	Baltimore, Md.....	June 24, 1844
Piano forte.....	Ottoviano Gori & Phi- lip Ernst.....	New York, N. Y....	Mar. 26, 1844
Piano forte.....	Simon W. Draper....	Boston, Mass.....	June 20, 1845
Piano forte.....	Edward Badlam.....	Potadam, N. Y....	Oct. 25, 1845
Piano forte.....	Samuel R. Warren....	Montreal, Canada...	July 10, 1845
Piano forte.....	E. L. Walker, assignee of G. W. Cherry....	Carlisle, Pa.....	Jan. 16, 1845
		Alexandria, D. C. }	
Piano forte.....	Louis Rueckert.....	Baltimore, Md.....	Mar. 12, 1845
Piano forte.....	Charles F. Oliver & G. W. Jackson.....	Lynn, Mass.....	May 1, 1845
Piano forte.....	Luther Philleo.....	Utica, N. Y.....	July 2, 1846
Piano forte.....	John Schriber.....	New York, N. Y....	Oct. 29, 1846
Piano forte, action.....	John F. Nunns.....	New York.....	May 5, 1831
Piano forte, action.....	Jesse Thompson.....	New York.....	Aug. 6, 1831
Piano forte, action of.....	Thomas Loud.....	Philadelphia, Pa....	Dec. 7, 1837

* Returned December 31, 1836.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Piano forte, action of	John J. Wise.....	Baltimore, Md.....	June 27, 1839
Piano forte, action of	Hiram Herrick.....	New York.....	Oct. 26, 1839
Piano forte, action	Timothy Gilbert.....	Boston, Mass.....	Feb. 10, 1841
Piano forte, Æolian attachment of reeds, & mode of adjusting pitch	Charles Horst.....	New Orleans, La....	Sept. 27, 1845
Piano forte, bottoms for.....	William F. Senior....	New York.....	Nov. 21, 1845
Piano forte, construction and action of.....	Alpheus Babcock	Philadelphia, Pa....	Dec. 31, 1833
Piano forte, cross stringing.....	Alpheus Babcock	Philadelphia, Pa....	May 24, 1839
Piano forte, glass strings.....	Richard Bury.....	Albany, N. Y.....	Aug. 21, 1819
Piano forte, hammer heads, fitting*	John Mackay.....	Boston, Mass.....	Aug. 14, 1828
Piano forte, hammer heads used in	Timothy Gilbert, ass'te of Edwin Forbes ...	Boston, Mass.....	Feb. 10, 1841
Piano forte, horizontal.....	Thomas Loud, jr.....	Philadelphia, Pa....	May 15, 1827
Piano forte, horizontal.....	Ebenezer R. Currier ..	Boston, Mass.....	April 22, 1831
Piano forte, horizontal.....	Fred. C. Reichenbach.	Philadelphia, Pa....	May 19, 1841
Piano forte, keys of.....	Daniel B. Newhall and Levi Wilkins, ass'tees of John Dwight.....	Boston, Mass.....	May 6, 1841
Piano forte, key for tuning.....	John Cutts Smith.....	Boston, Mass.....	Nov. 14, 1838
Piano forte, longitudinal bar.....	John Dwight.....	Boston, Mass.....	July 29, 1824
Piano forte, shifting movement for, square or horizontal.....	Thomas Loud.....	Philadelphia, Pa....	April 1, 1842
Piano forte, sounding board.....	James Stewart.....	Boston, Mass.....	Nov. 14, 1822
Piano forte, tuning	John J. Wise.....	Baltimore, Md.....	Nov. 19, 1833
Piano forte, tuning pins for.....	Jos. Shaler Ives.....	Bristol, Ct.....	Jan. 6, 1844
Piano forte, upright.....	Jesse Thompson.....	New York.....	Oct. 1, 1830
Piano forte, wrest pin of.....	Daniel Walker.....	New York, N. Y....	June 19, 1838
Picture frames, ornamental.....	John Parker & Lewis P. Clover.....	New York.....	Mar. 23, 1829
Picture, with looking glass back ground.....	Isaiah Jennings.....	New York.....	Nov. 11, 1831
Physiognotrace	J. Todd, Aug. Day, & William Bache.....	Pennsylvania.....	June 15, 1803
Physiognotrace	Daniel Atherton.....	Richmond, Va.....	May 4, 1805
Plates, graphic, for bank notes...	John Meer.....	Philadelphia, Pa....	July 1, 1815
Plate holder, self-regulating suspension.....	Southworth & Hawes.	Boston, Mass.....	June 13, 1846
Plates, polishing, by revolving cylinders.....	William I. Stone.....	Washington, D. C..	April 30, 1831
Plates, punched, etched, wiping & polishing their exterior surfaces	Samuel Couillard, jr..	Boston, Mass.....	Oct. 9, 1839
Plates, stereotype	Nathan Hale.....	Boston, Mass.....	Nov. 20, 1829
Plectro lira	Philip Trajetta.....	Philadelphia, Pa....	July 22, 1833
Polishing plates used in taking likenesses, apparatus for	John Johnson.....	New York.....	Dec. 14, 1841
Printing, anastatic.....	C. F. Baldamus & F. W. Siemans.....	Berlin, Prussia.....	Oct. 25, 1845
Printing apparatus.....	Joseph Warren.....	Warwick t'p, Ohio..	May 2, 1835
Printing, art of.....	William M. Dodge.....	New York.....	Mar. 6, 1823
Printing books	Samuel Randall.....	Warren, R. I.....	Jan. 4, 1816
Printing both sides of a continuous sheet	Thomas Trench.....	Ithaca, N. Y.....	Nov. 20, 1837
Printing calico	R. Ferguson and John Clark.....	Glasgow, Scotland..	April 25, 1846
Printing in colors.....	Alex. D. McKinzie...	Philadelphia, Pa....	Nov. 6, 1846
Printing in colors.....	Thomas F. Adams....	Philadelphia, Pa....	Sept. 17, 1844
Printing and drawing checks to prevent counterfeits.....	John Dainty.....	Philadelphia, Pa....	July 31, 1837
Printing, electrographic.....	A. W. Thompson.....	Philadelphia, Pa....	April 26, 1845
Printing, facilitating	Sam'l N. Dickinson..	Boston, Mass.....	Nov. 19, 1833
Printing & forming colored figures on hard substances	John Edwards.....	New York.....	Aug. 22, 1816
Printing machine.....	John Dixey.....	New Jersey.....	Jan. 24, 1798

* Renewed April 23, 1839.

† Renewed Sept. 17, 1830, Hanover, N. J.

‡ English patent, Sept. 14, 1844.

INVENTIONS OR DISCOVERIES.	PATENTEE.	RESIDENCE.	WHEN ISSUED.
Printing machine.....	Charles F. Voorhies..	Newark, N. J.....	April 8, 1834
Printing, machines for.....	Charles Thurber.....	Worcester, Mass....	Aug. 26, 1843
Printing machinery.....	John Hatch.....	Boston, Mass.....	Mar. 21, 1832
Printing, by means of rollers.....	Burgess Allison & W. Elliot.....	Washington, D. C..	Mar. 11, 1819
Printing, with metallic or colored powder.....	Geo. J. Newbury....	New York.....	Feb. 1, 1821
Printing music.....	Aw. Law.....	Connecticut.....	May 12, 1802
Printing paper on both sides.....	Henry Betts.....	Norwalk, Ct.....	Sept. 14, 1833
Printing press, apparatus of Neal's	Richard Wood.....	New York.....	Nov. 4, 1830
Printing press, card.....	Samuel Orcutt.....	Boston, Mass.....	Aug. 25, 1840
Printing press, circular.....	John B. Sawin & Thos. B. Wait.....	Boston, Mass.....	Feb. 1, 1810
Printing press, construction of...	William W. Smith...	New York, N. Y....	Feb. 1, 1842
Printing press, copperplate & steel	Jacob Perkins.....	Newburyport, Mass.	June 29, 1813
Printing press, copperplate.....	Cyrus Durand.....	New York.....	May 22, 1828
Printing press, cylindrical.....	Chas. G. Williams...	New York.....	May 29, 1828
Printing press, cylindrical.....	John B. Sawin & Thos. B. Wait.....	Roxbury, Mass....	Jan. 28, 1811
Printing press, double cylinder, register.....	Sereno Newton.....	New York.....	Feb. 26, 1833
Printing press, double Napier.....	Sereno Newton.....	New York.....	Feb. 26, 1833
Printing press, double and single Napier.....	A. B. Tyler.....	New York, N. Y....	April 4, 1846
Printing press, double cylinder...	Richard M. Hoe.....	New York, N. Y....	May 20, 1842
Printing press, Faustus.....	Seth Adams.....	Boston, Mass.....	May 23, 1832
Printing press, hand.....	Samuel Couillard, jr.	Boston, Mass.....	July 14, 1827
Printing press, hand.....	Luke Hale.....	Hollis, N. H.....	Dec. 12, 1831
Printing press, hand.....	F. J. Austin.....	New York.....	Oct. 8, 1836
Printing press, hand, straightening the toggle joint.....	Otis Tufts.....	Boston, Mass.....	Nov. 7, 1831
Printing press, and ink distributor	William Elliot.....	New York.....	Feb. 17, 1813
Printing press, locomotive cylinder	Chas. J. Carr & And. Smith.....	Belfer, England....	Sept. 10, 1840
Printing press, power.....	Daniel Treadwell....	Boston, Mass.....	Mar. 2, 1826
Printing press, power*.....	Isaac Adams.....	Boston, Mass.....	Oct. 4, 1830
Printing press, power.....	Isaac Adams.....	Boston, Mass.....	Mar. 2, 1836
Printing press, for proofs.....	Adam Ramage.....	Philadelphia, Pa...	May 19, 1823
Printing press, register for Napier	Michael Caton & John C. Rives.....	Washington, D. C..	Mar. 11, 1835
Printing press, roller.....	G. W. Cartwright...	Mount Pleasant, N. Y.	April 29, 1828
Printing press, roller.....	Joshua Laird.....	Pittsburg, Pa.....	Aug. 16, 1828
Printing press, Washington.....	Samuel Rust.....	New York.....	April 17, 1829
Printing press.....	Apollos Kinsley.....	Connecticut.....	Nov. 16, 1796
Printing press.....	Zach. Mills.....	Hartford, Ct.....	Feb. 26, 1813
Printing press.....	Daniel Pierson.....	Newburyport, Mass.	July 16, 1813
Printing press.....	Adam Ramage.....	Philadelphia, Pa...	May 28, 1818
Printing press.....	John J. Wells.....	Hartford, Ct.....	Feb. 8, 1819
Printing press.....	Abm. O. Stansbury...	New York.....	April 7, 1821
Printing press.....	Samuel Rust.....	New York.....	May 13, 1821
Printing press.....	Peter Smith.....	New York.....	April 6, 1822
Printing press.....	Daniel Neall.....	Philadelphia, Pa...	Nov. 15, 1825
Printing press.....	David Phelps.....	Boston, Mass.....	Sept. 15, 1826
Printing press.....	Samuel Fairlamb.....	New York.....	Nov. 4, 1826
Printing press.....	Samuel Couillard, jr.	Boston, Mass.....	Oct. 5, 1827
Printing press.....	J. C. Holbrook and E. H. Thomas.....	Brattleborough, Vt..	Feb. 7, 1828
Printing press.....	J. C. Holbrook and E. H. Thomas.....	Brattleborough, Vt..	Feb. 7, 1828
Printing press.....	John J. Wells.....	Hartford, Ct.....	June 29, 1829
Printing press.....	Jonas Booth, sen., Jas. Booth, Thos. Booth, & Jonas Booth, jr..	New York.....	Sept. 1, 1829
Printing press.....	Otis Tufts.....	Boston, Mass.....	July 30, 1831

* Extended 7 years from Oct. 4, 1844, by Congress.

† Reissued Feb. 13, 1834.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Printing press.....	Anson Sherman.....	New York.....	Feb. 26, 1837
Printing press.....	William R. Collier...	Washington, D. C..	April 11, 1834
Printing press.....	Otis Tufts.....	Boston, Mass.....	Aug. 23, 1834
Printing press.....	Adam Ramage.....	Philadelphia.....	Nov. 19, 1834
Printing press*	J. Lemuel Kingsley..	New York.....	Apr'l 22, 1836
Printing press.....	Hezekiah Camp.....	Trenton, Ohio.....	Mar. 4, 1836
Printing press.....	William and Thomas Schnebly.....	Hagerstown, Md...	Sept. 7, 1839
Printing press.....	J. Lemuel Kingsley..	New York.....	Oct. 31, 1839
Printing press.....	Stephen P. Ruggles..	Boston, Mass.....	Nov. 10, 1840
Printing press.....	Joel G. Northrup....	Cortlandville, N. Y.	Sept. 30, 1842
Printing press.....	Seth Adams.....	Boston, Mass.....	Sept. 27, 1844
Printing press.....	Richard M. Hoe.....	New York, N. Y....	Apr'l 17, 1844
Printing press.....	Richard M. Hoe.....	New York, N. Y....	July 30, 1844
Printing press.....	Alonzo Gilman.....	Troy, N. Y.....	Aug. 23, 1844
Printing press.....	John L. Kingsley....	New York.....	Jan. 4, 1845
Printing press.....	John C. Kneeland....	Troy, New York....	Feb. 20, 1845
Printing press.....	Joseph Saxton.....	Washington, D. C..	Mar. 21, 1845
Printing press.....	Joel G. Northrup....	Cortlandville, N. Y.	April 26, 1845
Printing press.....	Richard M. Hoe.....	New York.....	May 1, 1845
Printing press.....	W. W. Marston.....	New York, N. Y....	Sept. 12, 1846
Pronunciation of syllables.	Jac. A. Cummings...	Boston, Mass.....	Nov. 3, 1819
Reading, mode of teaching.....	Hugh Chard.....	Courtlandt, N. Y..	Feb. 16, 1809
Reeds, musical.....	Nathan B. Jewett....	Worcester, Mass....	Dec. 31, 1845
Ruler, parallel.....	James Carrington...	Wallingford, Ct....	April 14, 1832
Ruling books and paper.....	Mark J. Brunell.....	.....	Nov. 16, 1796
Ruling machine.....	Daniel Brewer.....	Pennsylvania.....	April 22, 1803
Ruling machine.....	Asa Spencer.....	New London, Ct....	Feb. 7, 1812
Ruling machine.....	Richard Wilcox.....	New York.....	Sept. 4, 1823
Ruling machine.....	George Crosbie.....	Augusta, Me.....	Jan. 21, 1825
Ruling machine.....	C. Lanuza.....	New York.....	Aug. 13, 1828
Ruling machine.....	Lewis Edwards.....	Norwich, Conn....	Oct. 9, 1845
Ruling machine, called the revol- ving rubber.....	Lemuel Hedge.....	Winsor, Vt.....	Mar. 3, 1817
Ruling machine, cylindrical, paper	John Fairbanks.....	Massachusetts.....	Nov. 30, 1803
Ruling machine, cylindrical.....	John Fairbanks.....	Boston, Mass.....	April 21, 1808
Ruling machine, double.....	Tim. Newhall.....	Lynn, Mass.....	Dec. 26, 1816
Ruling machine, hand.....	G. Strowhuver and Fred. Sauxay.....	Cincinnati, Ohio...	Sept. 1, 1817
Ruling machine, for paper.....	Lewis Henry.....	Bellows Falls, Vt..	Aug. 24, 1816
Ruling machine, for paper.....	James C. Teasdale...	Danaville, N. Y....	June 15, 1835
Ruling paper.....	Richard Robotham...	New York.....	Oct. 10, 1801
Ruling paper.....	Alfred Hathaway...	Troy, Mass.....	Dec. 31, 1832
Ruling paper.....	George L. Wright....	Springfield, Mass..	May 28, 1842
Sculptors, apparatus for.....	Henry Dexter.....	Boston, Mass.....	Mar. 28, 1842
Seraphines, improvement in.....	James A. Bazin.....	Canton, Mass.....	June 22, 1842
Seals, watch.....	S. Davis, H. P. Babbit & B. P. Grinnell...	Providence, Mass...	Mar. 3, 1827
Sign, for lottery offices.....	Elijah Secor.....	New York.....	Feb. 9, 1825
Stamps, for malleable metal.....	Jacob Stroop.....	Landisburg, Pa....	July 17, 1830
Stamps, for post and other offices	Benjamin Chambers..	Washington, D. C..	Sept. 9, 1835
Stamps, for post office.....	Asa White.....	Templeton, Mass...	Feb. 27, 1830
Stamping engravings on horn....	Joseph H. Derby....	Worcester, Mass....	April 30, 1816
Statues, design for.....	Alonzo L. Blanchard	Albany, N. Y.....	Aug. 26, 1843
Statues, casting, method of.....	Lawrence Myers.....	Philadelphia, Pa....	Jan. 8, 1842
Stencilling.....	Ezekiel B. Foster....	Philadelphia, Pa....	May 13, 1845
Stereotyping.....	Clement Davison....	Saratoga, N. Y....	Nov. 26, 1844
Tablets, compos'n. See Chemical.	Amos D. Allen.....	Windham, Conn....	May 10, 1804
Tobacco, pressing and cutting....	Henry Moore.....	Reedsville, N. C....	Dec. 16, 1845
Transferring impressions from pa- per to wood.....	A. C. Baker & M. F. Biddle.....	Albany, N. Y.....	Feb. 7, 1822
Types, No. 1, design for.....	George Bruce.....	New York, N. Y....	Nov. 2, 1842
Types, casting.....	William Wing.....	Hartford, Ct.....	Aug. 28, 1805
Types, casting.....	George F. Peterson...	New York.....	Oct. 13, 1836

* Released March 2, 1836.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Types, castings	James Stewart.....	New York, N. Y....	Mar. 21, 1842
Types, casting.....	David Bruce, jr.....	Williamsburg, Long Island, N. Y.....	Nov. 6, 1843
Types, casting.....	David Bruce.....	Williamsburg, N. Y.	June 7, 1845
Types, casting.....	Thomas W. Starr....	Philadelphia, Pa....	Aug. 4, 1845
Types, casting machine, called..	Jno. Sturdevant & E. Starr.....	Boston, Mass.....	Oct. 23, 1827
Types, casting, moveable.....	George Webster.....	New York.....	Feb. 28, 1816
Types, casting, printers.....	William M. Johnson	New York.....	Aug. 21, 1828
Types, casting, printers.....	David Bruce, jr.....	Bordentown, N. J..	Mar. 17, 1838
Types, casting and setting.....	William R. Collier..	Boston, Mass.....	Feb. 9, 1830
Types, caster, vertical.....	Elihu White, (assignee of M. D. Mann and Steph. Sturdevant..	New York.....	Jan. 7, 1831
Types, distributing and setting up	Frederick Rosenborg	Kingdom of Sweden; residing in Eng...	Nov. 27, 1840
Types, making and using.....	Lemuel Blake.....	Boston, Mass.....	Sept. 9, 1843
Types, moulds.....	George B. Lothian...	New York.....	Mar. 12, 1830
Types, moulds for casting.....	Archibald Binney...	Philadelphia.....	Dec. 18, 1816
Types, moulds, printers'.....	Archibald Binney...	Philadelphia, Pa....	May 17, 1814
Types, music.....	Uri K. Hill.....	New York.....	Jan. 29, 1811
Types, music, by combining printers' types.....	George Bruce.....	New York.....	Feb. 7, 1812
Types, music, cutting and casting.	George B. Lothian...	New York.....	Nov. 27, 1830
Types, rubber, or machine for smoothing.	Elihu White, (assignee of S. Sturdevant...	New York.....	Aug. 11, 1830
Type setting, cylindrical.....	Richard Hemming..	Boston, Mass.....	Jan. 7, 1831
Type setting machines.....	{ Jas Halden Young Adrien Delcambre..	England..... France.....	Dec. 16, 1845
Types, smoothing or rubbing..	Archibald Binney...	Philadelphia, Pa....	June 22, 1841
Types, smoothing the sides of...	David Bruce, jr.....	Bordentown, N. J..	Feb. 4, 1811
Typographer.....	Wm. A. Burt.....	Detroit, Mich.....	Mar. 10, 1838
Typography, universal.....	Josiah Warren.....	New Harmony, Ia..	July 23, 1829
Varnish, applying to whip staffs.	Fredrick Morgan...	Westfield, Mass....	April 25, 1846
Varnish and japanning.....	James Finnigan....	Newark, N. J.....	April 27, 1832
Violin.....	John Edwards.....	New York.....	Oct. 8, 1818
Violin, teaching the art of.....	Robt. McCormick, jr.	Augusta co., Va....	Feb. 17, 1830
Writing instrument.....	Ezra L. Miller.....	Charleston, S. C....	April 21, 1831
Writing on glass, composition for	William Davison....	New York.....	May 11, 1811
Writing machines.....	Charles Thurber....	Norwich, Ct.....	May 8, 1840
Writing, mode of teaching.....	Samuel Randall.....	Warren, R. I.....	Nov. 18, 1845
Writing, mode of teaching.....	Samuel Randall.....	Warren, R. I.....	Oct. 1, 1810
Writing, mode of teaching.....	Thomas Weston.....	Peacham, Vt.....	Jan. 11, 1812
			June 26, 1812

CLASS No. XIX.

FIRE ARMS,

AND

IMPLEMENTS OF WAR, AND PARTS THEREOF,

Including the Manufacture of Shot and Gunpowder.

LIST OF PATENTS.

CLASS XIX.—FIRE ARMS AND IMPLEMENTS OF WAR, AND PARTS THEREOF, including the Manufacture of Shot and Gunpowder.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Bells, cannon, manufacturing from malleable iron	L. Grandy & T. Osgood	Troy, N. Y.	Feb. 3, 1841
Bells, or shot, manufacturing	Levi Magers	New York	Nov. 13, 1840
Bells, throwing, machine for	Joseph Martin, M. D.	Louisville Ky.	Aug. 3, 1840
Barrels, gun	Asa Waters	Milbury, Mass.	Oct. 25, 1817
Barrels, gun, boring	Nathan Fordes	Plymouth, N. H.	Dec. 22, 1804
Barrels, gun, boring bit, nut for..	James Greer	Harper's Ferry, Va.	Oct. 3, 1817
Barrels, gun, draw, grinding	Thomas Dekin	Harper's Ferry, Va.	July 26, 1820
Barrels, gun, and of firearms, manner of combining	Jesse Griswold	Chambers co., Ala..	Feb. 1, 1842
Barrels, gun, manufacturing plates for	Harvey Mills	Springfield, Mass.	July 12, 1834
Barrels, gun, plating	John Fowler	Lancaster, Pa.	Jan. 4, 1810
Barrels, gun, rifle, or plain	Artemas Wheeler	Concord, Mass.	Feb. 19, 1819
Barrels, gun, scarfing, and rolling the scarf	John Bruce	Springfield, Mass.	Oct. 15, 1824
Barrels, gun, turning	Sylvester Nash	Harper's Ferry, Va.	April 11, 1818
Barrels, gun, turning	Asa Waters	Middlebury, Mass.	Dec. 19, 1818
Barrels, gun, turning	Seth Youngs	Hartford, Ct.	May 1, 1810
Barrels, gun, turning, lathes for..	D. Dana and A. Holmead	Canton, Mass.	Aug. 24, 1818
Bayonet sockets	Andrew Wilson	New York	June 11, 1814
Bomb, submarine or mine	Jas. McGregor, jr.	Wilton, N. Y.	Mar. 23, 1842
Cannon	Daniel Treadwell	Cambridge, Mass.	June 20, 1846
Cannon balls or shot, bomb shells casting, mode of forming moulds	Abial Elliot	Philadelphia, Pa.	Oct. 6, 1843
Cannon, cast iron	Cyrus Alger	Boston, Mass.	May 30, 1837
Cannon, for chain-shot	Edwin Gordon	Hingham, Mass.	Feb. 17, 1836
Cannon, elevating	Wm. H. Bell	Fortress Monroe, Va.	Dec. 8, 1829
Cannon locks	Enoch Hidden, ass't of Hidden & Sawyer	New York, N. Y.	April 29, 1842
Cannon, malleable iron	Geo. W. Chapman	New York	June 16, 1836
Cannon, method of discharging ..	Henry Whitcomb	Adams, N. Y.	Oct. 25, 1826
Cannon, pointing	John Hobday	Portsmouth, Va.	May 30, 1837
Cannon, pointing	Jer. Black	Northumberland, Pa.	Jan. 17, 1818
Cannon, primers for, percussion ..	Wm. H. Bell	Fortress Monroe, Va.	Dec. 8, 1829
Cannon, primers for, percussion ..	Joshua Shaw	Philadelphia, Pa.	Dec. 3, 1832
Cannon, rotary cylinder, many chambered*	John W. Cochran	Lowell, Mass.	Dec. 22, 1834
Cannon, traverse board	Wm. H. Bell	Washington, D. C. ..	May 14, 1836
Cannon, vent	W. H. Robertson, assignee of J. W. Cochran	Lowell, Mass.	Mar. 23, 1836
Cotton-wool, and other substances, a substitute for gunpowder	C. F. Schœnbein	Basle, Switzerland ..	Dec. 5, 1846
Cannon, wrought iron	Daniel Treadwell	Cambridge, Mass.	Feb. 12, 1845
Cannon, wrought iron, making ..	S. Hunt, adm'r of S. Hunt of Stonington, Conn.	Wolcottville, Ct.	Nov. 24, 1843
Cannon, wrought iron and steel ..	Ransom Cook	Saratoga Sp'gs, N. Y.	Feb. 1, 1843
Cannonade, screw box, elevating, and cap	Enoch Hidden	New York	April 26, 1836

* Reissued March 23, 1836.

† English patent dated Oct. 8, 1846.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Carriage, for field artillery.....	David Cobb.....	Boston, Mass.....	April 25, 1808
Carriage, gun.....	Samuel Hawkins.....	New York.....	Feb. 19, 1806
Carriage, gun.....	Wm. Smith.....	Washington, Ky.....	July 19, 1838
Carriage, gun, on ship board.....	John Bubier.....	Marblehead, Mass.....	Oct. 20, 1837
Carriage, pivot gun.....	L. M. Leighton.....	Portsmouth, N. H.....	Nov. 29, 1814
Cartouch box.....	John Mix.....	New York.....	June 3, 1813
Cartouch box.....	Robert Dingee.....	New York.....	Aug. 15, 1835
Cartouch box, boring blocks.....	Val. Bogenrieff.....	Georgetown, D. C.....	July 10, 1810
Fire arms.....	Wm. Thornton and J. H. Hall.....	Washington, D. C.....	May 21, 1811
Fire arms.....	Albert Holcomb.....	Litchfield, N. Y.....	Oct. 31, 1822
Fire arms.....	Fordyce Ruggles.....	Hardwick, Maine.....	Nov. 24, 1826
Fire arms.....	Joshua Shaw.....	Philadelphia, Pa.....	May 7, 1829
Fire arms.....	J. W. Plummer and J. Clark.....	Wayne towns'p, O.....	May 17, 1832
Fire arms.....	Jas. B. Porter.....	Girard, Pa.....	Aug. 4, 1832
Fire arms.....	Samuel Colt.....	Hartford, Ct.....	Feb. 25, 1836
Fire arms.....	Elij. Fisher and D. H. Chamberlain.....	Boston, Mass.....	April 17, 1837
Fire arms.....	Henry Harrington.....	Southbridge, Mass.....	July 29, 1837
Fire arms.....	H. and C. Daniels.....	Chester, Ct.....	Feb. 15, 1838
Fire arms.....	Wm. Jenks.....	Columbia, S. C.....	May 25, 1838
Fire arms.....	H. L. Thistle.....	New Orleans, La.....	Aug. 1, 1838
Fire arms.....	Samuel Adams.....	Springfield, Mass.....	Oct. 3, 1838
Fire arms.....	David Edwards.....	Zanesville, O.....	April 25, 1839
Fire arms.....	Nathan Starr.....	Middletown, Ct.....	May 3, 1839
Fire arms.....	Benj. F. Smith.....	South Hadley, Mass.....	Dec. 5, 1839
Fire arms.....	Silas Day.....	New York.....	Oct. 8, 1840
Fire arms.....	Wm. Hubbell.....	Philadelphia, Pa.....	July 1, 1844
Fire arms.....	E. Savage & S. North.....	Middletown, Ct.....	July 30, 1844
Fire arms, and apparatus used therewith.....	Samuel Colt.....	Paterson, N. J.....	Aug. 29, 1839
Fire arms, attached muzzle.....	Philo S. Newton.....	Hartford, Ct.....	June 1, 1843
Fire arms, discharging.....	Robert Eastman.....	Brunswick, Me.....	Dec. 7, 1829
Fire arms, gun breech.....	Silas Day, assignee of Samuel Hall.....	New York, N. Y.....	Dec. 31, 1839
Fire arms, guns, pistols.....	Geo. Stocker and Jos. Bentley.....	Birmingham, Eng.....	April 8, 1840
Fire arms, loading and discharging.....	Philip A. Morineau.....	Philadelphia, Pa.....	Oct. 10, 1832
Fire arms, loading, mode of.....	Thomas McCarty.....	Elmira, N. Y.....	Mar. 11, 1837
Fire arms, locks for, constructing.....	Ethan Allen, (2).....	Norwich, Ct.....	Nov. 11, 1837
Fire arms, manner of discharging.....	Joshua Shaw.....	Philadelphia, Pa.....	Jan. 30, 1841
Fire arms, many chambered.....	Elon B. Butterfield.....	Brattleboro', Vt.....	Mar. 16, 1839
Fire arms, many chambered.....	John W. Cochran.....	New York.....	April 29, 1837
Fire arms, many chambered.....	Daniel Leavitt.....	Cabotville, Mass.....	April 29, 1837
Fire arms, many chambered.....	Curtis Parkhurst.....	Lawrenceville, Pa.....	Sept. 25, 1837
Fire arms, many chambered.....	P. F. Haviland and E. A. Bennet.....	Waterville, Me.....	Feb. 15, 1838
Fire arms, many chambered.....	H. and C. Daniels.....	Chester, Ct.....	April 5, 1838
Fire arms, many chambered.....	Theodore F. Strong.....	Northampton, Mass.....	April 21, 1838
Fire arms, many chambered.....	Rufus Nichols and Ed. Childs.....	Conway, Mass.....	April 24, 1838
Fire arms, many chambered.....	Mighill Nutting.....	Portland, Me.....	April 25, 1838
Fire arms, many chambered.....	Elijah Jaquith.....	Brattleboro', Vt.....	July 12, 1838
Fire arms, many chambered, cylinder.....	John W. Cochran.....	New York.....	May 8, 1837
Fire arms, many chambered, cylinder.....	Otis W. Whittier.....	Endfield, N. H.....	May 30, 1837
Fire arms and ordnance.....	Henry C. Fay.....	Lancaster, Mass.....	May 22, 1837
Fire arms, overlaying with tin.....	Samuel Ladd.....	Waltham, Mass.....	Oct. 14, 1835
Fire arms, portable.....	Charles L. Stanialaus, Baron Heurteloup.....	Subject of France.....	July 29, 1841
Fire arms, rifles.....	James R. Thomas.....	Collingsworth, Ga.....	May 19, 1840

* Additional improvement, July 9, 1839.

† Antedated April 28, 1837.

† Reissued, Jan. 15, 1844, and Aug. 3, 1844.

‡ Antedated February 23, 1839.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ASSIGNED.
Fire arms, rifles, moveable loading muzzle	Alvan Clark.....	Cambridge, Mass...	April 24, 1840
Fire arms, rifles, water proof*...	L. Bailey, J. B. Ripley, and W.B. Smith	Portland, Me.....	Feb. 20, 1839
Fire arms, self loading and priming†	Silas Day.....	City of New York...	Aug. 31, 1837
Forts, iron, constructing	E. G. Woodman.....	Lowell, Mass.....	Jan. 27, 1843
Gunnery, repeating	Jos. C. Chalmers.....	W. Middletown, Pa.	Mar. 23, 1813
Gun, construction of.....	Alexander Boyden...	Newark, N. J.....	Jan. 10, 1824
Guns, constructing large	Wm. F. Loper.....	Philadelphia, Pa....	July 30, 1844
Gunpowder, corning or graining ..	Leonard T. Swett....	Canton, Ct.....	Nov. 16, 1841
Gun, to discharge seven or more times.....	Artemas Wheeler....	Concord, Mass.....	June 10, 1818
Gun-locks and percussion primers;	Edward Maynard....	Washington, D. C...	Sept. 22, 1845
Gun, manufacturing.....	David G. Colburn....	Canton canal, N. Y.	June 29, 1833
Gun, percussion	Joshua Shaw.....	Philadelphia, Pa....	June 19, 1822
Gun, percussion	James Tyrer.....	Petersburg, Pa.....	June 3, 1825
Gun, percussion, eight barrels ..	Samuel L. Faries....	Middletown, O.....	Oct. 10, 1829
Gun, percussion, and pistols	Joseph Finch.....	New York.....	April 12, 1823
Gun, revolving, four barrel, and percussion lock	Hy. Rogers.....	Middletown, O.....	May 7, 1829
Gun stocking, machinery for	Samuel D. Sizer.....	Springfield, Mass...	May 19, 1843
Knapsacks, folio, extension.....	James Boyd.....	Boston, Mass.....	Nov. 19, 1833
Knapsacks, military.....	John Sherbette.....	Washington, D. C...	Oct. 7, 1806
Knives, or dirks, attaching to pistols.....	Robert W. Andrews..	Stafford, Ct.....	July 31, 1837
Lock, compression, cannon.....	Joshua Shaw.....	Philadelphia, Pa....	Dec. 3, 1832
Locks, for fire-arms	Ethan S. Chapin....	Stafford Spring, Ct.	July 17, 1837
Locks, for fire-arms	Ethan Allen.....	Grafton, Mass.....	Nov. 11, 1837
Lock, gun.....	Edward West.....	Kentucky.....	July 6, 1802
Lock, gun.....	Alexander A. Colville	Little River, Me....	April 28, 1820
Lock, gun.....	Simon Cromwell....	Edgcomb, Me.....	Feb. 3, 1827
Lock, gun.....	Ephm. Gilbert.....	Rochester, N. Y....	April 3, 1829
Lock, gun.....	Abel Judson.....	New Lebanon, N. Y.	June 13, 1831
Lock, gun.....	Robert H. Fauntleroy	Posey county, Ind...	Aug. 17, 1833
Lock, gun.....	J. B. Gray.....	Fredericksburg, Va.	Oct. 7, 1834
Lock, gun.....	Samuel Morrison....	Milton, Pa.....	Feb. 10, 1836
Lock, gun.....	Philo W. Hoyt.....	Danbury, Ct.....	Mar. 10, 1838
Lock, gun, and pistol	Johnson Marsh....	East Dorset, Vt....	July 1, 1836
Lock, percussion.....	William A. Hart....	Fredonia, N. Y....	Feb. 20, 1827
Lock, percussion.....	Marvel Davis.....	Mayville, N. Y....	July 10, 1827
Lock, percussion.....	Jos. Shattuck.....	Jefferson co., Ohio..	Nov. 10, 1827
Lock, percussion.....	Owen Moses.....	Malone, N. Y.....	May 3, 1828
Lock, percussion.....	Jedediah Caswell....	Manlius, N. Y....	May 8, 1828
Lock, percussion.....	Jos. Lawrence.....	New Berlin, N. Y...	May 24, 1828
Lock, percussion.....	Nathaniel Saltonstall	New London, Ct....	May 29, 1828
Lock, percussion.....	Samuel Forker.....	Meadville, Pa.....	Feb. 13, 1830
Lock, percussion.....	Michael Carleton....	Haverhill, N. H....	Dec. 23, 1830
Lock, percussion.....	Israel B. Richardson.	Palmyra, N. Y....	Feb. 17, 1832
Lock, percussion.....	Francis Dowler.....	Wayne tp., Ohio....	April 9, 1832
Lock, percussion.....	David G. Colburn....	Port Byron, N. Y...	Oct. 25, 1832
Lock, percussion, cannon.....	Joshua Shaw.....	Philadelphia, Pa....	Oct. 24, 1828
Lock, percussion, cannon.....	Enoch Hidden.....	New York.....	Jan. 14, 1831
Lock, percussion, cannon.....	E. Hidden, (assigned to S. Ringgold and John P. Moore)...	New York.....	Dec. 16, 1831
Lock, percussion, cannon.....	Enoch Hidden.....	New York.....	Aug. 20, 1834
Lock, percussion, cannon.....	Robert Beale.....	Washington, D. C...	Jan. 13, 1835
Lock, percussion, concealed	Joel Newbury.....	Poughkeepsie, N. Y.	April 27, 1830
Lock, percussion, gun	Robert Beale.....	Washington, D. C...	Feb. 20, 1835
Lock, percussion, gun	Thomas Daplyn.....	Dover, Ohio.....	Feb. 20, 1835
Lock, percussion, lever	John Ambler, jr.....	S. New Berlin, N. Y.	Oct. 16, 1827
Lock, percussion, magazine.....	James B. Lowry.....	Mayville, N. Y....	Sept. 11, 1827
Lock, percussion, side, for rifles..	Elisha Strong.....	Claridon, Ohio.....	Aug. 2, 1831

* Antedated Nov 6, 1838.

† Additional improvement, Jan. 23, 1838.

‡ Antedated March 22, 1843.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Lock, percussion, and vent for cannon.....	William H. Bell.....	Norfolk, Va.....	Oct. 1, 1830
Lock, percussion, and walking cane rifles and pistols.....	Alvin D. Cushing....	Troy, N. Y.....	July 20, 1831
Lock, percussion, water proof, self-priming.....	Samuel L. Faries....	Middletown, Ohio..	May 29, 1832
Lock, portable, cannon.....	Joshua Shaw.....	Philadelphia, Pa....	Dec. 3, 1832
Lock, rifle.....	Jos. Medberry and S. Kellogg.....	Rochester, N. Y....	June 16, 1826
Lock, safety.....	Heinrich Bachman...	Lancaster, Pa.....	Aug. 21, 1833
Musket, containing a number of charges.....	J. Miller.....	Brighton, N. Y....	June 11, 1829
Percussion powder, for discharging arms.....	Samuel Guthrie.....	Sackett's H'r, N. Y.	Aug. 21, 1834
Pistols.....	B. and B. M. Darling.	Bellengham, Mass..	April 13, 1836
Pistols, knife, or cutlass.....	John Elgin.....	New York.....	July 5, 1837
Pistols, pocket.....	Victor M. Wallace....	West Topham, Vt....	Aug. 17, 1835
Pistols, sabre.....	Robert B. Lawton....	Newport, R. I.....	Nov. 30, 1837
Pistols.....	Ethan Allen.....	Norwich, Ct.....	April 16, 1845
Pontoons.....	Henry Carbery and Wm. Tatham.....	Washington, D. C..	July 19, 1816
Pontoon equipage for military....	Elisha M. Huntington administrator of J. F. Lane, deceased.....	Terre Haute, Ind...	June 17, 1840
Powder.....	R. I. L. Witty.....	Lowell, Mass.....	April 2, 1838
Powder, granulating.....	E. J. Demones Dupont	Wilmington, Del...	Nov. 23, 1804
Powder, granulating.....	Richard Crosbie.....	Newark, N. J.....	Feb. 17, 1812
Powder, granulating.....	Jos. Worslie.....	Berne, N. Y.....	Feb. 21, 1815
Powder, granulating.....	Charles Dalmas.....	Wilmington, Del...	April 26, 1816
Powder, granulating.....	Daniel Rogers.....	Newberg, N. Y....	Aug. 26, 1818
Powder, granulating.....	Gardiner Fulton.....	Philadelphia, Pa....	Aug. 21, 1819
Powder, granulating.....	Wm. F. Richardson..	Baltimore, Md.....	Aug. 3, 1822
Powder, manufacturing.....	Thomas Ewell.....	Georgetown, D. C..	Dec. 7, 1813
Powder, manufacturing.....	J. M. Merrow & R. McKee, Jr.....	E. Hartford, Ct....	April 19, 1822
Powder mill.....	George Keyser.....	Philadelphia, Pa....	July 27, 1803
Powder mill, manufacturing gun-powder.....	Henry Keyser.....	Philadelphia, Pa....	Aug. 10, 1791
Powder mill, and rice.....	Benjamin Bolitho....	Pennsylvania.....	Feb. 7, 1800
Quadrants, gunners'.....	Charles Hammond....	Concord, Mass.....	May 6, 1807
Ramrods.....	Charles C. Barstow...	Exeter, N. H.....	Nov. 21, 1820
Ramrods, screw, knives and forks.	Aaron Broad.....	Litchfield, Ct.....	June 6, 1814
Rifles.....	Elisha Strong & Cotton Kellogg.....	New Hartford, Ct..	Aug. 31, 1810
Rifles.....	Fred. Oeswan.....	Harper's Ferry, Va.	Feb. 25, 1815
Rifles.....	Obediah Stith.....	Quarlesstown, Va..	Mar. 16, 1819
Rifles, cane.....	Roger N. Lambert....	Upton, Mass.....	Feb. 27, 1832
Rifles, double shooting.....	Cyrus Mosher & Noble White.....	Hamilton, N. Y....	May 5, 1828
Rifles, manufacturing.....	Joseph W. Plummer and John Clarke...	Wayne tp., Ohio...	May 17, 1832
Rifles, repeating.....	Isaiah Jennings....	New York.....	Sept. 22, 1821
Rocket staffs, mode of stiffening..	John W. Cochran....	New York.....	April 30, 1840
Rockets, war, boring.....	Alvin C. Goell.....	Washington, D. C..	Mar. 18, 1841
Rockets, war, press for filling....	Alvin C. Goell.....	Washington, D. C..	Feb. 18, 1841
Shell and shot, elongated, spiral flanged.....	Wm. B. Pier and Andrew Mack.....	Detroit, Mich.....	April 6, 1832
Shot and balls, casting, of lead...	Daniel Pettibone....	Philadelphia, Pa....	Nov. 10, 1819
Shot, buck, manufacturing.....	John Snyder.....	New York.....	Jan. 26, 1832
Shot, charge.....	George W. Dobbin....	Baltimore, Md.....	Mar. 22, 1838
Shot, chain and cleaver, discharging.....	Israel Hatch.....	Massachusetts.....	May 24, 1802

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Shot, manufacturing.....	Julius Willard.....	Middletown, Ct....	July 10, 1830
Shot, manufacturing.....	John W. Pope.....	Philadelphia, Pa....	July 17, 1809
Shot, manufacturing.....	Alfred Duval.....	Baltimore, Md.....	May 8, 1838
Shot, manufacturing, and bullets..	Peregrine Williamson.	Baltimore, Md.....	May 12, 1813
Shot, manufacturing, by pressure.	Thomas Bruff.....	Washington, D. C..	Oct. 5, 1808
Shot, manufacturing, by pressure.	Thomas Bruff	Washington, D. C..	June 4, 1813
Shot, manufacturing, tubulated cylinder for.....	James M. Ludlum ...	New York.....	Aug. 3, 1813
Shot, manufactory.....	Phineas Daniel.....	Philadelphia, Pa....	Mar. 31, 1804
Shot, screening table.....	John W. Honey.....	Herculaneum, Mo....	Feb. 10, 1825
Sponges, for artillery.....	John Geither.....	Philadelphia, Pa....	May 16, 1826
Steam, shooting with.....	Samuel Morey.....	Oxford, N. H.....	Jan. 19, 1819
Stock, gun, crooking.....	John Schirer.....	Charleston, S. C....	April 12, 1826
Stock, gun, lathe for.....	Abner Town.....	Woodbury, Vt.....	Feb. 25, 1836
Stock, gun, sawing.....	Abraham Myers.....	Boonsborough, Mass	Nov. 9, 1832
Stock, gun, turning*.....	Thomas Blanchard...	Middlebury, Mass..	Jan. 12, 1820
Stock, gun, turning.....	Azariah Woolworth..	Waterbury, Ct.....	June 15, 1820
Throwing balls, shot.....	Robert McCarty.....	City of New York..	Dec. 31, 1838
Torpedo.....	Eb. Ford.....	Baltimore, Md.....	April 14, 1814
Trucks, gun, cutting.....	Robert Rose.....	Washington, D. C..	Aug. 6, 1821
Whip, percussion pistol.....	Joshua Shaw.....	Philadelphia, Pa....	Mar. 17, 1834

*June 30, 1834. Extended by act of Congress from 19th January, 1834.

CLASS No. XX.

SURGICAL

AND

MEDICAL INSTRUMENTS,

Including Trusses, Dental Instruments, Bathing Apparatus, &c.

LIST OF PATENTS.

CLASS XX.—SURGICAL AND MEDICAL INSTRUMENTS, including *Trusses, Dental Instruments, Bathing Apparatus, &c.*

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Abdominal supporter.....	L. D. Fleming.....	Newark, N. J.....	Dec. 31, 1845
Bandages, pads.....	Robert Thompson....	Columbus, Ohio....	July 29, 1837
Bath, and bathing machine.....	William Merritt.....	New York.....	Feb. 1, 1814
Bath, cot, elastic.....	W. C. Palmer, M. D....	New York.....	Nov. 24, 1832
Bath, double still, steam.....	John G. Giraud.....	Baltimore, Md.....	Mar. 18, 1804
Bath, floating.....	Henry Chevens.....	New York.....	July 13, 1813
Bath, medicated shampoo.....	Richard D. Mott.....	Boston, Mass.....	Dec. 16, 1833
Bath, medicated vapor.....	Morris Matson, M. D....	Boston, Mass.....	Sept. 28, 1843
Baths, medicated vapor.....	Lucien E. Hicks and Thomas Miner.....	Middletown, Conn..	Sept. 17, 1842
Baths, medicated.....	Benjamin Sweet.....	Mt. Morris, N. Y....	Dec. 31, 1845
Baths, portable.....	Nelson Bartlett.....	Belvidere, Illinois..	Sept. 23, 1845
Baths, portable shower.....	John Cutts Smith.....	Chelsea, Mass.....	June 2, 1845
Baths, portable.....	J. Wright Warren, jr..	Boston, Mass.....	July 31, 1840
Bath, portable, hot*.....	Samuel K. Jennings..	Lynchburg, Va.....	Jan. 21, 1814
Bath, shower.....	Stephen Bates.....	Dedham, Mass.....	Oct. 12, 1843
Bath, shower, portable.....	Nathaniel Waterman..	Boston, Mass.....	Aug. 11, 1843
Bath, shower.....	Horace Wells.....	Hartford, Ct.....	Nov. 4, 1846
Bath, steam.....	John Deverin & J. O. Isabelle.....	Lexington, Ky.....	July 6, 1818
Bath, steam, applying simple or medicated.....	Boyd Reilley.....	Cincinnati, Ohio....	Feb. 5, 1831
Bath, steam, applying simple or medicated.....	Boyd Reilley.....	Philadelphia, Pa....	July 31, 1832
Bath, steam, medicated.....	Benjamin Marshall....	New York.....	Dec. 7, 1821
Bath, vapor.....	P. P. N. D'Alvigny....	Leonard street, N.Y.	Aug. 17, 1835
Bath, vapor.....	Thomas S. Lambert....	Utica, N. Y.....	April 10, 1845
Bath, vapor.....	Joel H. Ross.....	New York.....	April 16, 1845
Baths, vapor, apparatus for.....	Alford C. Haines.....	Plattsburg, N. J....	Dec. 4, 1844
Bath, vapor, portable.....	Charles W. Peale.....	Pennsylvania.....	June 16, 1801
Bath, veterinary, ventilated.....	James Carver.....	Philadelphia, Pa....	Aug. 8, 1817
Bath, warm, vessel.....	Daniel Harrington....	Centreville, Va.....	Oct. 4, 1813
Bathing apparatus.....	A. H. Reip, (assignee of W. G. Young.....	Baltimore, Md.....	Dec. 16, 1845
Bathing apparatus.....	Heinrich Bachman and Joseph Ehrenfried..	Lancaster, Pa.....	Jan. 26, 1833
Bathing apparatus.....	Daniel Brumbley.....	New York.....	Nov. 19, 1833
Bathing apparatus.....	George J. Byrd and Peter Milne.....	New York.....	June 17, 1840
Bleeding, with leeches.....	John Kunitz.....	Philadelphia, Pa....	May 7, 1805
Bleeding horses, instrument for.....	Cornelius Addle.....	Winthrop, Me.....	May 9, 1835
Blind horses, curing.....	Jos. Sater.....	Huntsville, N. C....	Aug. 14, 1821
Bones, setting, apparatus for.....	James H. Willard.....	Brown Elm, Ohio....	June 11, 1836
Bougies for strictures.....	Robert J. Dodd.....	Philadelphia, Pa....	Oct. 6, 1843
Breathing tubes.....	Jacob S. Rose.....	Philadelphia, Pa....	May 8, 1843
Cancers, drawing and curing.....	Jacob Ware.....	Philadelphia, Pa....	Sept. 20, 1815
Cancers, curing.....	James Andrus.....	Hillsborough, N. H..	July 30, 1816
Catheter, metallic, flexible.....	Israel Balch and Moses Carter.....	Salisbury, Me.....	Oct. 26, 1815
Cataract, removing, by tubes.....	Francis B. Shaw.....	Philadelphia, Pa....	July 27, 1815
Cataract, instrument for operating	Thos. R. Williams....	Philadelphia, Pa....	June 14, 1826
Chair, enema.....	William Loughton....	Portsmouth, N. H..	Aug. 8, 1846

* Additional improvement March 3, 1843, extended 14 years from the 3d March, 1843.

† Antedated February 8, 1839.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Clubfoot, apparatus for the treatment of.....	John B. Brown.....	Boston, Mass.....	April 30, 1840
Conception, instrument for preventing.....	J. B. Beers.....	Rochester, N. Y.....	Aug. 28, 1846
Corns, eradicating.....	William Davis.....	Williamsburg, Va.....	Sept. 9, 1835
Corn eradicator.....	Peregrine Williamson.....	New York.....	May 17, 1838
Corslets for curved spines.....	Alanson Abbé.....	Roxbury, Mass.....	Aug. 7, 1844
Croup in poultry, curing.....	T. V. Bush.....	Clark, Ky.....	June 27, 1832
Cupping instruments.....	Robert J. Dodd.....	Philadelphia, Pa.....	April 13, 1844
Dislocations, reducing, apparatus for.....	George O. Jarvis.....	Portland, Ct.....	Sept. 14, 1843
Elevator, for the sick.....	John Elliott.....	Newbury, Mass.....	Feb. 15, 1811
Exercising machine.....	James Elliott.....	Newark, N. J.....	Sept. 2, 1845
Feet, straightening reel for.....	Gideon Goodrick.....	Portland Har., N. Y.....	July 22, 1833
Fractures, apparatus for the cure of.....	Orson M. Allaben.....	Middletown, N. Y.....	Dec. 12, 1839
Fractures, apparatus for.....	Lewis Post.....	Lodi, N. Y.....	Dec. 16, 1844
Fracture apparatus.....	Wm. Mills & Mahlon Hoar.....	New Athens, Ohio.....	Nov. 8, 1845
Fractures, apparatus for *.....	Livingston Roe.....	White Plains, N. Y.....	Nov. 6, 1844
Galvanic instruments.....	Daniel Harrington.....	Philadelphia, Pa.....	Sept. 2, 1845
Galvanic rings.....	David C. Moorehead.....	New York.....	Aug. 26, 1845
Hernia, cure of, by means of injections.....	Charles P. Sage.....	New York, N. Y.....	Jan. 10, 1843
Hernia, curved spine, apparatus for the cure of †.....	Eleazer Crain.....	Springfield, Vt.....	Jan. 16, 1843
Invalids, chairs for.....	James G. Holmes.....	Charleston, S. C.....	Sept. 24, 1844
Invalids, exercising them in their rooms.....	Daniel Harrington.....	Philadelphia, Pa.....	April 23, 1831
Lactae or artificial breast.....	C. M. Windship, M.D.....	Roxbury, Mass.....	Feb. 18, 1841
Lancet, spring.....	Jeremiah Dewey.....	Chelsea, Vt.....	April 2, 1824
Lancet, spring.....	John M. Van Osdel.....	Chicago, Ill.....	April 24, 1841
Lancet, spring.....	Jacob H. Gemrig.....	Philadelphia, Pa.....	April 11, 1846
Lancet, spring, and retreating.....	Thos. R. Williams.....	Newport, R. I.....	July 16, 1824
Lancet, or guard spring.....	Saml. Wilmot.....	Bridgeport, Ct.....	Oct. 25, 1832
Lancet, revolving.....	T. C. Harrison.....	New Egypt, N. J.....	June 20, 1836
Legs, apparatus for the relief of debility in the.....	Stephen P. W. Douglass.....	Palmyra, N. Y.....	May 15, 1841
Leg, artificial.....	Benj. F. Palmer.....	Meredith, N. H.....	Nov. 4, 1846
Leg and thigh, extending.....	Joseph Merrill.....	Glasgow, Ky.....	June 22, 1832
Lythontripter.....	Isaiah Lukens.....	Philadelphia, Pa.....	Dec. 30, 1826
Milk, drawing from breast.....	D. Haughtaling & A. Maneely.....	Watervleit, N. Y.....	June 11, 1829
Milk, drawing.....	Elihu Blake.....	New York.....	April 24, 1830
Nipples, artificial.....	Elijah Pratt.....	New York.....	Aug. 4, 1845
Nipple shield.....	William Baxton.....	Woburn, Mass.....	April 2, 1835
Nipple shield, artificial, metallic.....	John J. Heintzleman.....	Philadelphia, Pa.....	Mar. 16, 1833
Nursing bottle.....	Eugene Dupuy.....	New York.....	Oct. 7, 1844
Nursing bottle §.....	Elijah Pratt.....	New York.....	Aug. 9, 1845
Nursing cup.....	Sylvester W. Talbot.....	Dedham, Mass.....	April 19, 1833
Pessaries.....	Luke Parker.....	New York.....	Sept. 12, 1822
Pessaries.....	Jos. Warrington and Wm. Scatterford.....	Philadelphia, Pa.....	Sept. 5, 1831
Pessary.....	Joel B. Merriman.....	Sheffield, Mass.....	Oct. 24, 1846
Pessaries for prolapsus uteri.....	Samuel W. Stockton, assignee of Samuel K. Jennings.....	Baltimore, Md.....	Jan. 20, 1843
Points, metallic, to remove pain.....	Elisha Perkins.....	Connecticut.....	Feb. 19, 1796
Pump, breast.....	James P. Stabler.....	Sandy Spring, Md.....	June 19, 1834
Pump, stomach and breast, and cupping instruments||.....	Lemuel P. White.....	New York.....	July 22, 1833
Resuscitation, apparatus for.....	Edward Welshman.....	Cold Spring, N. Y.....	April 11, 1842
Scarificator.....	George Tiemann.....	New York.....	Aug. 26, 1834
Scarificator.....	A. F. Ahrens.....	Philadelphia, Pa.....	Aug. 26, 1846
Scarificator.....	George Tiemann.....	New York, N. Y.....	Aug. 20, 1846

* Antedated May 6, 1844.

§ Antedated June 16, 1845.

† Antedated July 16, 1842.

|| Reissued Dec. 23, 1834.

‡ Antedated July 4, 1845.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCE.	WHEN ISSUED.
Slack, machine for moving.....	John C. Jenckes.....	Providence, R. I.....	May 29, 1893
Speculum ani.....	Joseph T. Pitney.....	Auburn, N. Y.....	July 23, 1881
Spinal diseases, apparatus for the cure of.....	John S. Sullivan.....	New York, N. Y.....	May 16, 1846
Spine, infected apparatus.....	Jas. K. Casey.....	New York.....	June 23, 1828
Spine, stays for.....	Luden McKechnie.....	Pennsylvania.....	July 1, 1796
Splints, for fractured limbs.....	D. S. C. H. Smith.....	Sutton, Mass.....	July 7, 1829
Splints, for fractures.....	Enoch Thomas.....	New Athens, Ohio.....	Mar. 8, 1836
Splints, flexible, for fractured limbs	Wm. Wood, jr.....	Smithfield, Ohio.....	Mar. 5, 1833
Stays for supporting spine of the human body.....	Lyman Whiton.....	Troy, N. Y.....	Oct. 12, 1844
Stone in the bladder, instrument for crumbling.....	Jas. Lee Haanah.....	New York.....	Aug. 19, 1834
Strabismus, goggles for.....	Andrew Lake.....	Flatbush, N. Y.....	Nov. 4, 1842
Supporters, abdominal.....	Jos. White, S. Marsh, and H. Smith.....	Canajoharie, N. Y.....	Sept. 28, 1843
Supporters, umbilical, combined with corsets.....	Maria P. Dibble.....	New York city.....	May 20, 1842
Supporters, uterine.....	Alex. H. McNair.....	Philadelphia, Pa.....	July 28, 1843
Swing for exercise.....	Joel H. Ross.....	New York.....	Aug. 26, 1845
Syringes, enema.....	J. Parshall & D. Gilbert.....	Gettysburg, Pa.....	May 22, 1833
Syringe, injecting.....	Joseph Ralph.....	New York.....	Feb. 25, 1836
Teeth, artificial.....	Chas. M. Graham.....	New York.....	Mar. 9, 1822
Teeth, artificial, metallic plates, adjusting to.....	Thomas Vanderslice.....	Philadelphia, Pa.....	Jan. 5, 1831
Teeth, artificial.....	Chas. M. Graham.....	Philadelphia, Pa.....	Mar. 9, 1837
Teeth, artificial, adjusting the grinding surfaces of.....	James Cameron.....	Philadelphia, Pa.....	April 30, 1840
Teeth, artificial, mode of attaching	Alfred Riggs.....	New York.....	July 3, 1840
Teeth, artificial, manufacture of	Dan. Harrington.....	Philadelphia, Pa.....	Dec. 10, 1840
Teeth, apparatus to keep free from saliva.....	Charles Newton.....	New York.....	Sept. 27, 1825
Teeth, composition for preserving	Levi S. Parnly.....	New York.....	June 17, 1820
Teeth, cylinder turnkey for extracting.....	Hiram Todd.....	Columbus, O.....	May 9, 1846
Teeth, engrafting.....	Elijah A. Bigelow.....	Brandon, Vt.....	Mar. 8, 1827
Teeth, extracting.....	Thomas Bruff.....	Maryland.....	July 1, 1797
Teeth, extractor parallel moving.....	Elijah Bryan.....	New York.....	July 13, 1829
Teeth, and gums, obtaining casts from.....	Daniel T. Evens.....	Philadelphia, Pa.....	Aug. 28, 1840
Teeth, key for extracting.....	John McConnell.....	Philadelphia, Pa.....	Sept. 20, 1839
Teeth, improvement in setting.....	Matt. S. Foster.....	Trenton, N. J.....	Nov. 12, 1842
Teeth, metallic.....	Anthony Plantou.....	Philadelphia, Pa.....	April 5, 1828
Teeth, porcelain, securing them.....	S. G. Chamberlain.....	Philadelphia, Pa.....	Feb. 11, 1831
Teeth, preventing decay.....	H. H. Hayden.....	Baltimore, Md.....	Feb. 11, 1824
Teeth, setting.....	John Allen.....	Cincinnati, O.....	Dec. 16, 1845
Teeth, setting artificial.....	Jonathan Dodge.....	New York city.....	Mar. 4, 1843
Teeth, setting artificial.....	J. Smith Dodge.....	New York.....	Mar. 13, 1844
Teeth, setting natural and artificial	Wm. R. Eagleston.....	Baltimore, Md.....	Oct. 4, 1817
Thigh, fractured, apparatus for.....	Samuel Wolston.....	Vincennes, N. J.....	July 2, 1836
Tooth extractor.....	Moses R. Hanson.....	Bangor, Me.....	Mar. 12, 1836
Tooth extractor.....	David H. Diokey.....	Boston, Mass.....	Aug. 30, 1838
Tooth extractor.....	J. W. Baker & W. W. Riley.....	Columbus, O.....	Nov. 8, 1845
Tooth extractor.....	Moses I. Hill.....	Bloomfield, Ind.....	June 7, 1841
Tooth extractor, vertical.....	I. W. Rutherford.....	Albany, N. Y.....	Jan. 4, 1831
Tooth key.....	Cornelius Addle.....	Winthrop, Me.....	July 31, 1833
Tourniquet.....	Jos. Strong.....	Pennsylvania.....	Jan. 29, 1801
Tonsillarum sector.....	Wm. B. Fahnestock.....	Lancaster, Pa.....	May 25, 1832
Truss.....	James Cerneau.....	New York.....	Aug. 17, 1809
Truss.....	Abel Blanchard.....	Pembroke, N. H.....	May 17, 1817
Truss.....	Amos G. Hull.....	Utica, N. Y.....	July 17, 1817
Truss.....	Benjamin Stratton.....	Philadelphia, Pa.....	June 23, 1819
Truss.....	Christian Stockman.....	Albany, N. Y.....	Nov. 7, 1825

* Antedated Nov. 17, 1845.

† Antedated June 18, 1840.

‡ Antedated Feb. 27, '33. Aug. 19, '34. Oct. 26, '36. Dec. 30, '30. Aug. 17, '31.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ASSURED.
Truss.....	John Blagge.....	Portland, Me.....	Dec. 15, 1825
Truss.....	Seymour Marsh.....	Canajoharie, N. Y.....	Mar. 29, 1830
Truss.....	James Knight.....	Baltimore, Md.....	Dec. 14, 1830
Truss.....	Jesse C. Earl.....	Baltimore, Md.....	Mar. 19, 1831
Truss.....	Ralph Glover.....	New York.....	May 3, 1833
Truss.....	Hor. G. Jamieson.....	Baltimore, Md.....	Aug. 29, 1833
Truss.....	John Morris.....	Derby, Ct.....	Nov. 19, 1833
Truss.....	James McChesney.....	New York.....	Dec. 21, 1833
Truss.....	Thomas Stagner.....	Madison, Ct.....	April 5, 1834
Truss.....	F. H. Newman.....	Huntsville, Ala.....	Feb. 25, 1836
Truss.....	Edm. P. Banning.....	Pittsburg, Pa.....	April 6, 1843
Truss.....	John V. Wilson.....	New Haven, Ct.....	May 26, 1843
Truss.....	David Sabin.....	Lancaster, Pa.....	Mar. 20, 1844
Truss.....	Epenetus Bennet.....	New York.....	April 30, 1844
Truss.....	Carter & Reinhardt.....	Baltimore, Md.....	Sept. 24, 1844
Truss.....	Eliakim C. Darling.....	New Orleans, La.....	Nov. 6, 1844
Truss.....	Calvin Cutter.....	Springfield, Mass.....	Dec. 16, 1844
Truss.....	Edwin K. Gale.....	New York city.....	Mar. 14, 1846
Truss.....	Cook & Strickler.....	S Strasburg, Va.....	Mar. 21, 1846
Truss.....	B. C. Everett, assignee of B. W. Stratton.....	Philadelphia, Pa.....	Mar. 21, 1846
Truss.....	A. F. Ahrens.....	Philadelphia, Pa.....	Nov. 28, 1846
Truss.....	David B. W. Hard.....	Bethlehem, Conn.....	May 16, 1845
Truss, bolted.....	John Beath.....	Boston, Mass.....	Feb. 7, 1807
Truss.....	John W. Newson.....	New York.....	June 20, 1836
Truss, common convex.....	Philip Hittel.....	Philadelphia, Pa.....	May 2, 1835
Truss, corset.....	Johannes Oberhausser.....	Charleston, S. C.....	Jan. 20, 1838
Truss, double pads.....	Wm. R. Goulding.....	New York.....	July 5, 1845
Truss, double spring, angular.....	Theo. Hart.....	New York.....	Aug. 30, 1811
Truss, double spring.....	Daniel Weaver.....	Baltimore, Md.....	Nov. 19, 1833
Truss, elastic.....	Gershon Twitchell.....	Leominster, Mass.....	Dec. 20, 1830
Truss, gum elastic pad.....	J. J. Heintzelman.....	Philadelphia, Pa.....	July 20, 1831
Truss, gum elastic, hernia.....	Vernum Wilkinson.....	New York.....	Nov. 14, 1835
Truss, gum elastic, hernia.....	Robert Semple.....	Vidalia, La.....	Nov. 14, 1835
Truss, for hernia.....	Thomas Lawrence.....	Winchester, Ky.....	Aug. 4, 1834
Truss, for hernia.....	John L. Price.....	Nicholasville, Ky.....	Oct. 31, 1834
Truss, for hernia.....	John W. Wood.....	Clarke co., Ky.....	April 2, 1835
Truss, for hernia.....	Benj. M. Smith.....	Lumpkin co., Ga.....	April 14, 1835
Truss, for hernia.....	J. J. Heintzelman.....	Philadelphia, Pa.....	June 6, 1835
Truss, for hernia.....	Wm. Adair.....	Pleasant Hill, Ky.....	Feb. 17, 1836
Truss, for hernia.....	Isaac Thompson.....	Brattleboro', Vt.....	July 1, 1836
Truss, for hernia.....	Elijah Jaquith.....	Brattleboro', Vt.....	Mar. 11, 1837
Truss, for hernia.....	Heber Chase, M. D.....	Philadelphia, Pa.....	June 10, 1837
Truss, for hernia.....	Richard Salisbury.....	Providence, R. I.....	Nov. 4, 1837
Truss, for hernia ^a	Josiah Hungerford.....	Dover, N. Y.....	Dec. 26, 1837
Truss, for hernia.....	Samuel A. Brown.....	Petersburg, Va.....	May 25, 1838
Truss, for hernia.....	John M. Sinton.....	Hackettstown, N. Y.....	June 27, 1839
Truss, for hernia.....	William B. Dey.....	Hope, N. J.....	July 9, 1839
Truss, for hernia [†]	Moore R. Fletcher.....	Boston, Mass.....	Feb. 26, 1840
Truss, for hernia.....	Enoch Thomas.....	New Athens, O.....	Mar. 12, 1840
Truss, for hernia.....	Wm. B. Dodson.....	Louisville, Ky.....	June 17, 1840
Truss, for hernia.....	Edmund Landis.....	Lancaster, Pa.....	Oct. 22, 1842
Truss, for hernia, reducing, method of treatment.....	Zophar Jayne.....	Carrollton, Ill.....	April 2, 1841
Truss hoop, making.—See Hoops, Class 14.	Bela Farr.....	Norwich, N. Y.....	Mar. 9, 1832
Truss, (improvement on Hull's).....	Eli M. Gibbs.....	Norwich, N. Y.....	May 28, 1835
Truss, ladies'.....	D. B. W. Hard.....	Bethlehem, Ct.....	Mar. 21, 1846
Truss, metallic.....	Frederick Harbach.....	Pittsfield, Mass.....	Aug. 12, 1846
Truss pads.....	Ovando Hurlbut.....	Buffalo, N. Y.....	Aug. 8, 1846
Truss, procidentia and prolapsus uteri.....	Amos G. Hull.....	New York.....	May 7, 1834
Truss for prolapsus uteri.....	Allran Potect.....	Danville, Ind.....	June 29, 1839
Truss for prolapsus uteri.....	Wm. Reynolds.....	Camden, S. C.....	Dec. 14, 1839

^a Additional improvement, July 2, 1842.[†] Antedated February 12, 1846. This is a truss for a bridge, and should be in Class IX, page 128.

‡ Antedated June 21, 1846.

† Antedated August 26, 1838.

‡ Reissued Sept. 14, 1839.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Truss for prolapsus uteri	Goodown Bright.....	Bellbrook, O.....	Dec. 17, 1840
Truss for prolapsus uteri	J. A. Campbell, M. D.	Lima, N. Y.....	April 10, 1841
Truss for prolapsus uteri & hernia	Geo. W. Riddell.....	Knightstown, Ind...	July 11, 1842
Truss, relaxation of the vagina...	A. G. Hull, adm'r of John F. Gray	New York.....	Dec. 9, 1835
Truss, ruptures	Cyrus Stone.....	Massachusetts	May 6, 1800
Truss, spiral	P. A. De Savignac	New York.....	July 13, 1809
Truss, spiral spring.....	Joseph Farr.....	Manlius, N. Y.....	Feb. 7, 1824
Truss, spiral spring, conical	Jesse R. Hovey	Sangerfield, N. Y...	Mar. 31, 1825
Truss, spiral spring.....	Bela Farr	Norwich, N. Y.....	Mar. 21, 1826
Truss, spiral spring.....	J. J. Heintzelman.....	Philadelphia, Pa....	Feb. 16, 1830
Truss, spring	Henry Reid.....	Augusta, Ga.....	Oct. 21, 1835
Truss, varicocele.....	Amos G. Hull.....	New York.....	July 5, 1833
Uterine injections, instruments for	Dan Gale	Boston, Mass.....	Oct. 16, 1844
Uterine supporter.....	Ephraim Colvin	N. Granville, N. Y.	Aug. 4, 1845
Vaccinator, spring.....	Wm. Haslett.....	Baltimore, Md.....	April 17, 1817
Vaccination	James Smith	Baltimore, Md.....	July 10, 1822

CLASS No. XXI.

WEARING APPAREL,

Articles for the Toilet, &c., including Instruments for Manufacturing.

LIST OF PATENTS.

CLASS XXI.—WEARING APPAREL, *Articles for the Toilet, &c., including Instruments for Manufacturing.*

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Bodkin, for inserting corset rings into cloth.....	Jonathan S. Turner...	Middletown, Ct.....	April 25, 1837
Brush, cloth and hair.....	Herrick Aiken.....	Dracut, Mass.....	May 24, 1830
Brush, hair.....	Joseph B. Burgess...	New York.....	April 14, 1835
Brush, tooth.....	Philos Blake.....	New Haven, Ct.....	Mar. 8, 1830*
Buckles, for suspenders.....	Orange Webb.....	New York.....	July 5, 1817
Buckles, suspender.....	James Bingham.....	Philadelphia, Pa.....	Feb. 4, 1843
Bureau, dressing table.....	Nathaniel Perry.....	Boston, Mass.....	Oct. 13, 1809
Buttons.....	John Hatch.....	Attleborough, Mass.	Feb. 20, 1845
Buttons, American wire-eyed.....	Festus Hayden.....	Waterbury, Ct.....	Oct. 1, 1830
Buttons, attaching to cloth.....	Henry S. Poole.....	Boston, Mass.....	Aug. 11, 1841
Buttons, composition, for wire-eyed	Saml. H. Woodruff & A. Matthews.....	Connecticut.....	Mar. 1, 1816
Buttons, constructing eyes for metal, cast in moulds.....	Ira Ives.....	Bristol, Ct.....	Aug. 7, 1815
Buttons, forming collets, washers.	Moses Ferre.....	Williamsburg, Mass.	July 28, 1842
Buttons, glass, finishing.....	Spencer Richards.....	Attleborough, Mass.	Aug. 19, 1822
Buttons, grinding steel dies for...	Willard Robinson...	Attleborough, Mass.	Mar. 3, 1829
Buttons, holdfast while polishing.	Ira Ives.....	New Haven, Ct....	June 18, 1814
Buttons, machine for finishing metal.....	Heman Matthews...	Southington, Ct....	Sept. 12, 1815
Buttons, machine for making wire neck metal.....	Heman Matthews...	Southington, Ct....	Sept. 12, 1815
Buttons, manufacturing.....	Geo. W. Robinson...	Providence, R. I....	Mar. 24, 1804
Buttons, manufacturing of*.....	Thomas Prosser.....	Paterson, N. J.....	July 29, 1841
Buttons, manufacturing, called "the safe-eyed button,".....	Chas. Goodyear.....	Philadelphia, Pa....	Jan. 12, 1831
Buttons, manufacturing, dead-eyed wood.....	De Grasse Fowler...	Branford, Ct.....	June 13, 1831
Buttons, manufacturing, dead-eyed wood.....	De Grasse Fowler...	New Branford, Ct..	May 8, 1833
Buttons, manufacturing, metallic, flexible shank.....	Josiah Hayden, jr....	Williamsburg, Mass.	Feb. 17, 1831
Buttons, metallic, making.....	Festus Hayden.....	Waterbury, Ct.....	July 10, 1840
Buttons, mode of constructing bright dies for stamping highly polished blanks or shells for.	Green Kenrick, ass'ee of Wm. B. Dunbar.	Waterbury, Ct.....	Oct. 31, 1839
Buttons, mode of fastening.....	Stephen Clapp, ass'ee of H. W. Hewet.	New York.....	Dec. 10, 1840
Buttons, moulds for casting metal.	Geo. W. Robinson...	Providence, R. I....	May 14, 1812
Button moulds wooden.....	Anson Matthews.....	Southington, Ct....	April 26, 1815
Button moulds, single jointed, pewter, for wire-eyed.....	John B. Collins.....	Meriden, Ct.....	April 12, 1815
Buttons of paper †.....	Elisha M. Pomeroy...	Wallingford, Ct....	Sept. 23, 1843
Buttons, securing in a lathe.....	Geo. W. Robinson...	Providence, R. I....	June 27, 1809
Buttons, setting eyes of metal in the moulds.....	Ira Ives.....	Bristol, Ct.....	Aug. 7, 1815
Buttons, smoothing and rounding the eye of metal.....	Ira Ives.....	Bristol, Ct.....	Aug. 7, 1815
Buttons, turning.....	Danl. French.....	Bridgeport, Pa.....	April 23, 1816
Buttons, turning and polishing...	Lauren Merian.....	New Haven, Ct....	Jan. 4, 1815
Buttons, wooden moulds.....	John Morton.....	Southington, Ct....	June 13, 1816

* Antedated January 26, 1841.

† Reissued Nov. 24, 1843.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Caleash, balloon, for ladies.....	Harriet Cook.....	Onondaga, N. Y....	Feb. 20, 1833
Caps, manufacturing, and rendering them water proof *.....	Laban L. Macomber..	Gardiner, Me.....	Jan. 19, 1831
Clasps for pantaleon straps.....	William H. Miller....	New-York, N. Y....	July 8, 1842
Clothes, pressing.....	Jos. Sage.....	Berlin, Ct.....	April 14, 1810
Collars, Belvidere, shirt.....	Wm. J. Cantelle and Robt. M. Kerrison.	Philadelphia.....	Nov. 18, 1833
Collars, for dress coats.....	Henry Clark.....	Brooklyn, Ct.....	Nov. 7, 1828
Combs, clarifying horse hoofs for	Edw. M. Canviss....	Southington, Ct....	May 6, 1812
Combs, cutting.....	David E. Noyes.....	Philadelphia, Pa....	Oct. 14, 1819
Combs, cutting.....	Nison Foot.....	Philadelphia, Pa....	Oct. 28, 1819
Combs, cutting.....	Benjamin Haskill....	Paris, France.....	Nov. 3, 1819
Combs, cutting, at a single operation.....	Joseph H. Derby....	Leominster, Mass...	May 26, 1814
Combs, cutting, horn or tortoise shell.....	Simeon Allen.....	Philadelphia, Pa....	April 1, 1815
Combs, cutting machine.....	Thos. G. Thomas....	Philadelphia, Pa....	June 14, 1817
Combs, cutting machine.....	Daniel Pettibone....	Philadelphia, Pa....	April 10, 1818
Combs, cutting the teeth of.....	Joseph S. Ives.....	Bristol, Ct.....	Oct. 8, 1840
Combs, for the hair.....	George Hooker.....	Bristol, Ct.....	April 3, 1835
Combs, forming and shaping....	Saml. Lambert.....	Hanover co., Va....	Jan. 9, 1835
Combs, machines for grailing....	Philo Pratt.....	Meriden, Ct.....	Feb. 12, 1838
Combs, machine for making, called a grinding comb stock.	J. Pitts, Cyrus Houghton and Jos. Rice...	Lancaster, Mass....	Oct. 1, 1830
Combs, making, ornamental.....	Uriah Bailey.....	Wt. Newbury, Mass.	Nov. 15, 1837
Combs, manufacturing.....	Phineas Pratt.....	Connecticut.....	April 12, 1799
Combs, manufacturing.....	Phineas Pratt.....	Saybrook, Ct.....	Mar. 5, 1800
Combs, manufacturing.....	Eli Sperry.....	New Haven, Ct....	Mar. 28, 1816
Combs, manufacturing.....	Daniel Pettibone....	Philadelphia, Pa....	Aug. 11, 1819
Combs, manufacturing.....	John Brown.....	Providence, R. I....	June 11, 1823
Combs, manufacturing.....	Eli Sperry.....	New Haven, Ct....	Oct. 10, 1833
Combs, manufacturing.....	B. Redheffer and Wm. Redheffer.....	Penn township, Pa.	May 26, 1834
Combs, manufacturing hair.....	Moses Moss.....	Farmington, Ct....	Jan. 10, 1809
Combs, manufacturing hair.....	Timothy Stanley....	Southington, Ct....	July 6, 1809
Combs, manufacturing, from hoofs of cattle.....	Ira Ives.....	Bristol, Ct.....	April 5, 1829
Combs, manufacturing, horn and shell.....	Robert Gedney.....	New York.....	June 26, 1809
Combs, manufacturing, horn and shell.....	Samuel Parmelee....	Saybrook, Ct.....	July 15, 1816
Combs, manufacturing, horn and shell.....	Maulby J. Littleboy..	Philadelphia, Pa....	Nov. 19, 1830
Combs, manufacturing, ivory....	David Williams, 3d..	Saybrook, Ct.....	Mar. 28, 1810
Combs, manufacturing, ivory, bone, and wood.....	Julius Pratt.....	Meriden, Ct.....	Dec. 28, 1830
Combs, manufacturing, and plating horn with tortoise shell....	John P. Spies.....	Baltimore, Md.....	Jan. 8, 1810
Combs, manufacturing, and slitting horn for lanterns.....	John Pulsifer.....	Newbury, Mass....	May 24, 1814
Combs, manufacturing, snuff boxes, from raw hides.....	Samuel Pike.....	Providence, R. I....	June 11, 1800
Combs, manufacturing, socket, hair.....	Eli Parsons.....	Bristol, Ct.....	Aug. 16, 1810
Combs, manufacturing, welding, or cementing horn, hoofs.....	Arad B. Newton.....	Baltimore, Md.....	Mar. 31, 1834
Combs, manufacturing, wooden..	Nat. Jones.....	Southington, Ct....	May 9, 1809
Combs, metallic.....	Wm. A. Langworthy..	Bailstown, N. Y....	Feb. 26, 1816
Combs, metallic.....	Linus North.....	Otsego, N. Y....	May 26, 1818
Combs, metallic.....	Allen Porter.....	Hartford, Ct.....	June 14, 1834
Combs, metallic.....	Nathl. Bushnell.....	Middletown, Ct....	Oct. 31, 1835
Combs, metallic.....	H. Durell.....	New York.....	June 30, 1836
Combs, metallic.....	Richard A. Ives.....	Bristol, Ct.....	July 1, 1836
Combs, metallic.....	Richard A. Ives.....	Bristol, Ct.....	Mar. 28, 1836
Combs, metallic.....	Richard A. Ives.....	Bristol, Ct.....	Sept. 25, 1838

Reissued Oct. 11, 1831.

† Disclaimer April 27, 1837.

INVENTIONS OR DISCOVERIES.	PATENTERS.	RESIDENCES.	WEAVERED.
Combs, ornamental, tortoise shell.	Uriah Bailey.....	W. Newbury, Mass.	Feb. 22, 1837
Combs, ornamenting.....	Ed. Munster.....	Philadelphia, Pa....	June 27, 1829
	Julius Pratt, Ferner Bush, Aaron Pratt, Zina K. Murdock.	Meriden, Ct.....	
Comb-plates, planing or fashioning ivory or other.	George Reed, Alpheus Starkey, George Spencer, John C. Rodgers, ass'ees of Wm. M. Fowler.....	Saybrook, Ct.....	Oct. 28, 1840
Combs, pressing horn for.....	Uriah Bailey.....	W. Newbury, Mass.	Feb. 2, 1836
Combs, pressing tortoise shell, horn	Reuben Munson.....	New York.....	May 22, 1832
Combs, pointing and cutting.....	Isaac Tryon.....	Connecticut.....	Feb. 23, 1796
Combs, rolling the backs of Brazilian tortoise shell.....	Nathl. Bishop.....	Danbury, Ct.....	Nov. 17, 1837
Combs, rubbing down and polishing	Lewis B. Findle and T. Curtis.....	Newtown, Ct.....	Oct. 10, 1839
Combs, splitting tortoise-shell....	William Redheffer.....	Penn township, Pa.	June 18, 1842
Combs, stamp, twinning, and horn splitting machine.	Samuel Hills & Moses Emery, jr.....	Newburyport, Mass.	Oct. 21, 1814
Combs, teeth, cutting of.....	Maulby J. Littleboy.....	Philadelphia, Pa....	May 28, 1816
Combs, teeth, cutting of.....	Joel Brown.....	Springfield, Mass.	Dec. 8, 1824
Combs, teeth, cutting of.....	Lemuel Adams.....	Redding, Ct.....	May 2, 1835
Combs, teeth, cutting, ivory.....	Philo Pratt.....	New York.....	Sept. 9, 1825
Combs, teeth, sawing.....	Philo Pratt.....	New York.....	April 20, 1825
Combs, twinning horn and shell....	David E. Noyes.....	Philadelphia, Pa....	Sept. 6, 1817
Combs, twinning machine.....	Daniel Carrington and Ira Ives.....	Litchfield, Ct.....	Aug. 20, 1813
Combs, vice used in cutting.....	Philo Pratt.....	Meriden, Ct.....	Nov. 22, 1825
Combs, wooden.....	Nathl. Bushnell.....	Middletown, Ct....	April 14, 1829
Corsets.....	Mary Brush.....	New York.....	July 21, 1815
Corsets.....	William J. Cantelo.....	New York.....	Dec. 31, 1821
Corsets, rings, grooves in.....	Charles Buckland.....	Middletown, Ct....	June 2, 1836
Corsets, worn by females during pregnancy.....	Elizabeth Adams.....	Boston, Mass.....	Jan. 21, 1841
Corsets.....	Alanson Abbe.....	Worcester, Mass....	April 2, 1841
Drawers.....	Henry Brewer.....	New York.....	Feb. 28, 1823
Dresses, ladies', frame; finishing..	Jamea R. Williams.....	Baltimore, Md.....	Mar. 3, 1824
Dresses, ladies', guide for cutting.	Hiram Seger.....	Macon, Ga.....	Jan. 28, 1846
Garments, for boys.....	Charles Herwick.....	New York.....	May 16, 1826
Garments, cutting.....	Allen Ward.....	Huntsville, Ala....	June 18, 1827
Garments, cutting.....	Ethan Campbell.....	Philadelphia, Pa....	Nov. 6, 1833
Garments, cutting.....	Levi P. Lemont.....	Bath, Me.....	Jan. 9, 1829
Garments, cutting.....	Andrew Wiswell.....	Exeter, N. H.....	July 11, 1837
Garments, cutting.....	David N. Sipperly.....	Troy, N. Y.....	July 8, 1843
Garments, cutting.....	Sylvanus B. Stilwell.....	Brooklyn, N. Y....	June 20, 1845
Garments, cutting the bodies of coats in one piece.....	William M. Wiswell.....	Portland, Me.....	April 10, 1839
Garments, draughting coats, geometrical measure for.....	William C. Bishop.....	Ovid, N. Y.....	April 25, 1837
Garments, draughting and cutting	Jamea H. Chapple.....	Chillicothe, Ohio....	Jan. 18, 1834
Garments, draughting and cutting	William W. Allen.....	Philadelphia, Pa....	Oct. 23, 1827
Garments, draughting fore part of coats.....	Allen Ward.....	Moyamensing, Pa..	Sept. 28, 1837
Garments, fitting ladies' dresses..	Samuel S. Richardson.....	Baldwin, Me.....	April 4, 1844
Garments, instruments for measuring the human body, &c.....	Daniel Williams.....	New York, N. Y....	April 26, 1839
Garments, marking out and cutting	John Pudney.....	Waterford, N. Y....	Sept. 3, 1831
Garments, marking out and cutting	George Beard, jr.....	W. Whiteland tp., Pa.	Aug. 5, 1833
Garments, marking out and cutting	Benjamin J. Lewis.....	Mount Vernon, O....	Nov. 19, 1833
Garments, measuring and cutting.	Stephen Severance.....	Baltimore, Md.....	Mar. 15, 1826

*Additional improvement, February 18, 1846.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Garments, measuring and cutting.	James Henderson and Cooper K. Watson.	Zanesville, Ohio....	Oct. 22, 1831
Garments, measuring and cutting.	James G. Wilson....	New York.....	May 3, 1833
Garments, measuring and cutting.	Wm. Kahler & Charles Kahler	Bloomsburg, Pa....	Jan. 20, 1838
Garments, measuring and cutting.	Hiram Seger	Macon, Ga.....	April 29, 1842
Garments, measuring and draughting	D. & L. Pendell.....	Gilboa, N. Y.....	June 14, 1843
Garments, measuring the human body.....	Isaiah J. Hendryx...	Troy, N. Y.....	April 18, 1840
Garments, measuring and draughting	Thomas E. Tilden...	Baltimore, Md....	Dec. 5, 1840
Garments, measuring for.....	Aaron A. Tentler	Philadelphia, Pa....	Jan. 23, 1841
Garments, measuring for.....	James Mendenhall ...	West Chester, Pa...	April 16, 1833
Garments, measuring for.....	C. W. M. Bacon	New York.....	April 20, 1833
Garments, measuring for.....	Daniel Williams.....	New York.....	May 22, 1833
Garments, measuring for.....	John S. Rockafellow ..	Flemington, N. J...	Sept. 18, 1835
Garments, measuring instruments	Henry B. Brundage...	Middletown, N. Y.	Feb. 7, 1842
Garments, measuring instruments	Peter F. L. Veret....	Warrenton, Ga....	May 26, 1842
Garments, measuring instruments	Joseph Knowland and Jacob F. Knowland.	Boonsborough, Ky.	July 20, 1842
Garments, measuring and marking out coats.....	Allen Ward.....	Philadelphia, Pa....	Jan. 7, 1835
Garments, pantaloons measurer..	Edwin Grimston.....	Danvers, Mass....	Sept. 21, 1837
Garments, pantaloons, straps for..	Enos Wilder.....	Boston, Mass....	Nov. 19, 1833
Garments, pockets of.....	Daniel Harrington....	Philadelphia, Pa....	Oct. 11, 1841
Garments, ruler, cutting out.....	Otis Madison.....	Troy, N. Y.....	Aug. 18, 1829
Garments, ruler, triangular measure case.....	Allen Ward.....	Philadelphia, Pa....	Oct. 11, 1838
Garments, scale for draughting...	N. B. Starr.....	Philadelphia, Pa....	July 10, 1839
Garments, square for cutting.....	James G. Wilson	New York.....	Feb. 23, 1827
Garments, standard measure for coats.....	Erastus Barber	Boston, Mass....	Dec. 26, 1837
Garments, tailors' draughting instruments	Edward J. Axford....	Philadelphia, Pa....	Mar. 30, 1839
Garments, tailors' instruments for measuring.....	John P. Barnett and Francis Story.....	Catskill, N. Y.....	Nov. 12, 1839
Garments, tailors' instruments and mode of measuring	Lewis Flenner.....	Philadelphia, Pa....	Nov. 10, 1841
Garments, tailors' measures.....	Lyman B. and Ellery Miller.....	Wall Hill, N. Y....	May 29, 1841
Garments, tailors' measuring instruments	William J. Lemmond.	Lancaster, S. C....	April 18, 1840
Garments, tailors' measures, constructing	Richard Dame.....	Hanover, N. H....	May 8, 1840
Garments, tailors' measure for laying out.....	Frederick A. Fairchild	Columbus, Ga.....	Oct. 31, 1835
Garments, tailors' square, delineating.....	Andrew Wiswell....	Exeter, N. H.....	June 7, 1832
Garments, woollen	J. Foster and J. Stondenburg	Green county, N. Y.	April 20, 1830
Gloves, wafers, leather, for cutting	Elisha M. Ely.....	Paris, France	Jan. 28, 1839
Hat bodies	William Toaket.....	Ware, Mass.....	Jan. 23, 1846
Hats, firemens'	James Brown.....	Newark, N. J.....	Nov. 1, 1845
Hats, improvement in forming...	R. Wildham.....	Hartford, Conn....	July 20, 1846
Hats, ventilating	George W. Cherry...	Alexandria, D. C...	July 26, 1845
Hat, ventilating	Richard Halloran...	New York, N. Y....	Mar. 21, 1846
Hats.....	Henry A. Wells.....	New York, N. Y....	April 25, 1846
Hone or strap, razor.....	William D. Boardman	Rensselaerville, N. Y	Jan. 20, 1843
Hooks and eyes.....	Elisha C. Savage.....	Hartford, Conn....	Mar. 26, 1844
Hooks and eyes for fastening garments	Charles Atwood.....	Derby, Ct.....	Feb. 24, 1843

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Moccasins, applying hat trimmings to.....	James Jackson.....	Burlington, N. Y....	April 1, 1815
Moccasins, manufacturing.....	Alfred Tjollutson.....	New York.....	Nov. 22, 1823
Moccasins, manufacturing.....	Catharine Elliot.....	New York.....	Jan. 26, 1825
Moccasins, manufact'ng in moulds	John J. Staples and Wm. H. Cornell....	New York.....	Dec. 15, 1824
Moccasins, manufacturing, water proof.....	John Syms.....	New York.....	Nov. 10, 1827
Moccasins, socks.....	Denison Williams....	New York.....	Oct. 24, 1832
Pocket book and watch safe.....	Joseph Colton.....	Amherst, Mass.....	April 18, 1846
Razor case, portable.....	Harvey Wright.....	Bristol, Ct.....	Nov. 19, 1833
Razor case, and sharpener.....	E. M. Pomeroy.....	Wallingsford, Ct....	Oct. 19, 1836
Razor, sharpening, application of adhesive slate.....	William Child.....	Baltimore, Md.....	Dec. 15, 1835
Razor strap.....	Jona. Crumbacker....	Union, Md.....	Dec. 24, 1819
Razor strap.....	John M. Fors.....	Baltimore, Md.....	Oct. 2, 1821
Razor strap.....	Jac. Houck.....	New Market, Md....	Jan. 24, 1822
Razor strap.....	John W. Osborn.....	Terre Haute, Ind....	Jan. 21, 1829
Razor strap.....	Gooding Halloway....	Chester, Ohio.....	April 3, 1829
Razor strap.....	Elisha M. Pomeroy....	Wallingsford, Ct....	Sept. 6, 1833
Razor strap and case.....	Aaron & Luther Hill..	Stoneham, Mass....	July 17, 1839
Reticules.....	William Winning.....	New York.....	Nov. 7, 1821
Ruffles, plaiting.....	Sylvester W. Talbott..	Dedham, Mass.....	May 4, 1816
Selvage, double stitched.....	J. A. & E. Wadsworth	Portsmouth, R. I....	Oct. 5, 1824
Shears, flying.....	Seth Parsons.....	Hoosick Falls, N. Y.	June 7, 1838
Shears, tailors'.....	John Andrews, (ass'ee of Rochius Heinisch)	New York.....	Mar. 11, 1835
Shears, tailors'.....	Rochius Heinisch.....	Newark, N. J.....	Feb. 27, 1839
Shears, tailors'.....	James G. Wilson, as- signee of Thomas Hawkins.....	New York, N. Y....	Mar. 23, 1842
Shears, tailors'*.....	Hermann Wendt.....	New York, N. Y....	Mar. 23, 1842
Shears, tailors'.....	Thomas J. Sloan.....	New York, N. Y....	Sept. 23, 1842
Shears, tailors'.....	Richard Fitzgerald....	Elizabethtown, N. J.	April 28, 1836
Shell or horn, machine for cutting	Joel R. Morse.....	Lowell, Mass.....	May 2, 1846
Skirts, ladies'.....	David Hough, jr.....	New York, N. Y....	June 16, 1846
Skirts, ladies'.....	Sevall Folsom.....	Bridgeport, Conn....	Dec. 17, 1846
Socks, Columbian.....	Joseph Mason.....	Cunnington, Mass....	Feb. 8, 1816
Socks, moccasins.....	William Bolton.....	Northampton, Mass.	Oct. 21, 1814
Socks, for over-shoes.....	William Brower.....	Rensselaer city, N. Y.	Mar. 6, 1822
Springs, for belts, pantaloons straps, vests.....	Walter Hunt.....	New York, N. Y....	Mar. 21, 1838
Stock.....	Joseph Touseon.....	Baltimore, Md.....	May 14, 1827
Stock.....	Edmund Badger.....	Philadelphia, Pa....	April 5, 1832
Stock, composition hinge.....	G. R. Sillibridge.....	New York.....	Oct. 10, 1829
Stock, frames of hair.....	William Merriam.....	New Haven city., Ct.	Mar. 14, 1833
Stock, gentlemen's plain and dress	Denison Williams....	Albany, N. Y.....	Oct. 1, 1830
Stock, jubilee.....	William J. Cantelo and R. M. Kerrison....	Philadelphia, Pa....	Aug. 30, 1826
Stock, for the neck.....	William Carlock.....	Baltimore, Md.....	Aug. 9, 1831
Stock, for the neck.....	Thomas Goodrum.....	New York.....	Aug. 27, 1835
Stock, for the neck, metallic frame for.....	John Johnson.....	New York.....	Dec. 31, 1838
Stock, for the neck, shaping.....	Thomas Goodrum.....	New York.....	July 1, 1836
Stock, self-adjusting.....	Charles Fanshaw.....	New York, N. Y....	Oct. 3, 1846
Suspender buckles.....	Henry Dubosq.....	Philadelphia, Pa....	April 25, 1844
Straps for pantaloons.....	M. H. Simpson.....	Boston, Mass.....	May 30, 1839
Straps, suspender, attaching to pantaloons.....	David B Cook.....	New York.....	Sept. 4, 1841
Suspenders, manufacturing.....	Orange Webb.....	New York.....	Sept. 18, 1804
Suspenders, manufacturing.....	Simon Smith.....	New Haven, Ct.....	Oct. 23, 1804
Suspenders, manufacturing.....	Richard Howell.....	.....	Mar. 5, 1806
Suspenders, manufacturing.....	Jones Dawson.....	Philadelphia, Pa....	Nov. 6, 1806
Suspenders, manufacturing.....	James Davis.....	Philadelphia, Pa....	May 15, 1810

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Suspenders, manufacturing.....	Henry Burke.....	Bucks county, Pa...	May 25, 1811
Suspenders, manufacturing.....	Martin Nelson.....	Philadelphia, Pa....	Oct. 17, 1814
Suspenders, manufacturing.....	Joseph Barnett.....	Philadelphia, Pa....	Sept. 14, 1816
Suspenders, manufacturing.....	Benjamin Wildes....	Utica, N. Y.....	Aug. 19, 1826
Suspenders, manufacturing.....	Abm. L. Vanhorn....	Philadelphia, Pa....	Feb. 22, 1827
Suspenders, manufacturing.....	Edwin Chesterman...	New York.....	June 19, 1827
Suspenders, manufacturing, double spring.....	Benjamin Wolcott...	Danbury, Ohio.....	May 29, 1811
Suspenders, manufacturing, gum elastic.....	Ransom Warner.....	New York city.....	Mar. 18, 1836
Suspenders, straps.....	Orange Webb.....	New York.....	Oct. 14, 1807
Suspenders, springs and cords...	Allyn Bacon.....	Philadelphia, Pa....	Dec. 17, 1830
Tailoring, art of.....	Greenberry Ross.....	Carlisle, Ky.....	April 5, 1826
Tailoring, art of.....	Charles Kenrick.....	New York.....	Feb. 8, 1822
Tailoring, art of*.....	Daniel Williams.....	New York, N. Y....	May 22, 1833
Tailoring, art of.....	James Zwiesler, jr....	Hagerstown, Md....	July 1, 1836
Tailoring, system of.....	Amos Sherman.....	Newark, N. J.....	July 17, 1837
Tailors' bench.....	Wm. Burtis.....	New Brunswick, N.J.	Oct. 3, 1808
Tailors' measurers.....	Thomas Oliver.....	New York, N. Y....	Mar. 30, 1843
Tailors' measurers.....	Cyrus Morey and D. Hummer.....	Arthurston, Ohio...	July 8, 1843
Tailors' measurers.....	George Eckler and J. X. Ball.....	Flint Creek, N. Y....	Sept. 28, 1843
Tailors' measures.....	Henry Isham.....	Montpelier, Vt....	May 30, 1844
Tailors' measures.....	John B. Combs.....	Trenton, N. J.....	Nov. 9, 1844
Tailors' measures.....	Abraham A. Bogardus	Newburg, N. Y....	Nov. 29, 1845
Tailors' measures.....	Allen Ward.....	Camden, N. J.....	Dec. 26, 1845
Tailors' measures, system for cutting coats.....	Wm. R. Acton.....	Richmond, Va.....	Sept. 5, 1846
Tailors' measures, system for measuring and cutting garments...	Henry Donges.....	Newport, Pa.....	April 25, 1846
Tailors' measures.....	Benj. G. Martin.....	Richmond, Va.....	Oct. 29, 1846
Tailors' measure for cutting coats	Conrad Kile.....	Nashville, Ohio....	June 29, 1846
Tailors' shears.....	Isaac Jacques.....	Elizabethtown, N. J.	Aug. 28, 1846
Umbrellas.....	Gilbert S. Ward.....	Newark, N. J.....	April 21, 1842
Umbrellas.....	Waring Latting.....	New York, N. Y....	Nov. 21, 1843
Umbrella, manufacturing.....	William Gamble.....	Washington, D. C...	July 3, 1824
Umbrellas and parasols.....	Elisha Hale.....	Newburg, N. Y....	Dec. 28, 1839
Umbrella and parasol, manufacturing.....	William Sleeper.....	Philadelphia, Pa....	Nov. 22, 1826
Umbrella stand, design.....	Wm. L. Miller.....	New York.....	Sept. 13, 1845
Umbrella, water proof.....	Edwin L. Simpson...	Roxbury, Mass....	Nov. 19, 1834
Vests stiffner, spring for.....	James G. Shute.....	Boston, Mass.....	Dec. 5, 1827
Wigs.....	F. Deville.....	Baltimore, Md....	Sept. 17, 1842
Wigs.....	William Dowell.....	Philadelphia, Pa....	Dec. 12, 1842
Wigs, metallic.....	François Bourguet...	New York.....	Mar. 8, 1840

* Reissued August 31, 1839.

† Antedated June 28, 1839.

CLASS No. XXII.

MISCELLANEOUS.

LIST OF PATENTS.

CLASS XXII.—MISCELLANEOUS.

INVENTIONS OR DISCOVERIES.	PATENTEES.	RESIDENCE.	WHEN ISSUED.
Arithmetic, new mode of teaching	B. M. Van Der Veer.	Clyde, N. Y.	July 14, 1846
Awings, improvement in	John Sebo.....	Wilmington, Del...	May 25, 1844
Band-boxes, machine for cutting..	Benj. Meastayer.....	New York.....	Nov. 13, 1831
Baskets for catching fish	John Downs.....	Belleport, N. Y.....	April 25, 1843
Bomb lance.....	Oliver Allen.....	Norwich, Conn....	Sept. 19, 1846
Bottles, washing, filling, & cork'g	Keene A. Bille.....	New York.....	Nov. 8, 1838
Boxes, marking.....	E. Wilson, assignee of J. C. Walker.....	Concord, N. H.....	Aug. 26, 1843
Boxes, removing square and other prismatic	Steph. D. Williamson	Anderson, O.....	Feb. 4, 1843
Box-trap for catching animals....	J. Stroon & J. Esteale	Alleghany, Pa.....	Nov. 6, 1843
Caoutchouc, cutting into shreds...	Wm. Atkinson.....	New York.....	Oct. 6, 1835
Cane coverers.....	John P. Bryan.....	Princeton, Ky.....	June 24, 1843
Chickens, hatching, by artificial heat.....	Napoleon E. Guerin...	New York, N. Y....	Mar. 30, 1843
Cigars, machine for making	Hosea Peirce.....	Winchester, N. H...	Dec. 10, 1846
Cigars, making.....	Jonathan Ball	Buffalo, N. Y.....	Oct. 12, 1842
Coal-breaker.....	Benj. Haywood.....	Pottsville, Pa.....	May 21, 1845
Coal-breaker.....	Wm. Richardson.....	Philadelphia, Pa....	Sept. 2, 1845
Cocoonut cutter.....	Dan. Fitzgerald.....	New York.....	Dec. 22, 1831
Coffins, of artificial stone or mar- ble	John White.....	New York.....	July 18, 1835
Coffins, from hydraulic cement....	Dayton, Hoyt & White	Salina, N. Y.....	June 6, 1835
Coffins, from hydraulic cement....	John White.....	New York.....	July 18, 1835
Coffins, lodgements in	Moses Leonard.....	New York.....	July 2, 1839
Coffins, metallic.....	James A. Gray.....	Richmond, Va.....	June 11, 1836
Coffins, used in cases of doubtful death.....	C. H. Eisenbrandt...	Baltimore, Md.....	Nov. 15, 1843
Combs, machine for dressing....	Calvin R. Rogers....	Saybrook, Ct.....	Dec. 20, 1845
Corn husks, slitting, for mattresses	Asa Barrett	Baltimore, Md.....	April 21, 1836
Corpse preserver, design for.....	John Good.....	Philadelphia, Pa....	Aug. 17, 1836
Cushion, for billiard tables.....	Abm. Basford.....	New York.....	July 20, 1831
Dead bodies, preserving.....	Frederick & Trump..	Baltimore, Md.....	May 9, 1846
Ducks, mode of catching.....	Wm. Coffield.....	Norfolk.....	Jan. 18, 1830
Fencing	Richard Weems.....	Maryland.....	Mar. 16, 1801
Fencing, of clay posts.....	William Cooley.....	Bolton, Ct.....	May 27, 1825
Fencing grounds.....	Othello Church.....	Friendship, N. Y....	July 23, 1823
Fencing, repairing.....	Edward Pitkins.....	E. Hartford, Ct....	Dec. 13, 1828
Fire escape.....	Syl'r Penfield.....	Hartford, Ct.....	Mar. 3, 1840
Fire escape.....	Wm. P. Withey.....	Hartford, Ct.....	May 12, 1840
Fire escape.....	S. Welsh & T. Lina- cree.....	Albany, N. Y.....	Jan. 23, 1841
Fire ladders	Morton B. Hill.....	Fairfield, Ohio.....	Sept. 1, 1843
Fish, catching	Jos. Ellicott.....	Pennsylvania.....	May 25, 1795
Fish, catching	Daniel Gordon.....	L'r Chaunceford, Pa	Mar. 27, 1824
Fish, catching	Arunah Tiffany.....	Gibson, Pa.....	July 26, 1838
Fish, mode of carrying in warm weather.....	Nathaniel Robbins...	New Jersey.....	Mar. 11, 1802
Flies, killing	Aw. Glendenning...	Loudoun co., Va....	Sept. 9, 1824
Fly, driver.....	R. H. Faunterloy....	New Harmony, Ia....	Aug. 13, 1834
Harpoons.....	Holmes & West.....	Tisbury, Mass.....	Nov. 24, 1846
Harpoons.....	Chas. Randall.....	Palmyra, Ga.....	Dec. 3, 1846

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Horses and cattle, mode of breaking.....	David Cooley, jr.....	Orange co., N. Y....	June 23, 1810
Horses' ears, mode of setting.....	Seth Jones.....	.....	Dec. 31, 1804
Horses, machine for stopping.....	Peter Laporte.....	Louisa county, Va....	Mar. 20, 1821
Horses, mode of improving the shape of.....	Aaron Carman.....	Hyde Park, N. Y....	Nov. 27, 1828
Horses' tails, hold'g up after nick'g	Gibbons Gray.....	Westchester, Pa....	July 31, 1846
Horses, training and breaking...	Townsend Cook.....	New York.....	Mar. 1, 1811
Hurdle, for rearing silk worms...	Gamaliel Gay.....	Poughkeepsie, Ct....	Oct. 6, 1838
Ice, accumulating.....	John Dutton.....	Aston, Pa.....	May 8, 1843
Ice, cars and receiving platforms for removing blocks of.....	Nat. J. Wyeth.....	Cambridge, Mass....	Oct. 25, 1843
Ice cutters and markers.....	Nat. J. Wyeth.....	Cambridge, Mass....	Oct. 25, 1843
Ice, cutting.....	Nat. J. Wyeth.....	Cambridge, Mass....	Dec. 1, 1840
Ice, forming.....	T. B. Smith.....	St. Louis, Mo.....	Jan. 23, 1841
Ice, improvement in accumulating	John Dutton.....	Aston, Pa.....	Aug. 18, 1846
Ice, machinery for cutting.....	Blount & Campbell...	Osterville, Mass....	Aug. 26, 1846
Ice, machinery for elevating blocks	Nat. J. Wyeth.....	Cambridge, Mass....	Nov. 6, 1843
Ice, machinery for reducing blocks to uniform thickness.....	Nat. J. Wyeth.....	Cambridge, Mass....	Dec. 1, 1840
Ice, machinery for raising blocks of, from the water-side and placing in sleds.....	Nat. J. Wyeth.....	Cambridge, Mass....	Dec. 1, 1840
Ice, machinery for raising blocks of, &c., depositing in storehouse	Nat. J. Wyeth.....	Cambridge, Mass....	Dec. 10, 1840
Ice, machinery for raising blocks of.....	Nat. J. Wyeth.....	Cambridge, Mass....	Dec. 10, 1841
Ice, manner of cutting.....	Nat. J. Wyeth.....	Cambridge, Mass....	Mar. 18, 1829
Ice, mode of obtaining and secur'g	Jos. E. Manuel.....	Philadelphia, Pa....	July 12, 1839
Ice, packing and stowing.....	Fred. Sudor.....	Boston, Mass.....	May 4, 1838
Ice, preparing for shipping.....	Nat. J. Wyeth.....	Cambridge, Mass....	Dec. 1, 1837
Ice preserver, portable.....	Enoch Powers.....	Hartford, Ct.....	Aug. 28, 1821
India rubber, cutting, (see Chemicals, class 4, pages 101, 109)	H. G. Tyler & J. Helm	N. Brunswick, N. J.	Oct. 9, 1844
India rubber fabrics.....	Charles Goodyear....	New York.....	Mar. 9, 1844
India rubber fabrics.....	Charles Goodyear....	New York.....	Mar. 9, 1844
India rubber fabrics.....	Charles Goodyear....	New York.....	June 15, 1844
India rubber goods, corrugated and shurred*.....	Horace H. Day.....	Jersey City, N. J....	Oct. 12, 1844
Ivory, vice slitting.....	Philo Pratt.....	Meriden, Ct.....	Feb. 12, 1828
Knives, handles for.....	Zina K. Murdock....	Meriden, Ct.....	April 16, 1841
Ladder, flagration.....	Bennet Lies.....	New York.....	June 20, 1815
Ladder, fire.....	Samuel Lehman.....	Philadelphia, Pa....	Aug. 9, 1826
Ladder, fire.....	James L. Hannah....	New York.....	Aug. 19, 1834
Ladder, fire-escape.....	James Cox.....	Brush Valley, Pa....	June 27, 1846
Ladder, life-escape and fire.....	Jas. Johnson.....	Baltimore, Md.....	April 18, 1831
Match splints and arranging.....	A. Fessenden and L. Knight.	Templeton & Barre, Mass.....	April 26, 1845
Mail and travelling bags, India rubber.....	Edw. M. Chaffee....	Boston, Mass.....	Dec. 31, 1833
Mill, floating and silent fisher...	Eb. Ford.....	Charleston, S. C....	Dec. 21, 1809
Net for catching fish.....	James Drummond....	New York.....	Aug. 27, 1818
Net for catching mackerel.....	Benj. W. Hale.....	Newbury, Mass....	June 4, 1838
Net, gill, for catching fish.....	Harris Cook.....	Haddam, Mass....	Mar. 17, 1843
Oyster platform.....	John Freeland.....	New York.....	April 29, 1828
Palm-leaf, machine for splitting..	Corey McFarland....	Barre, Mass.....	Mar. 31, 1841
Palm-leaf, machine for splitting..	Chas. Wadsworth....	Barre, Me.....	Nov. 17, 1834
Palm-leaf, machine for splitting..	Chas. Wadsworth....	Barre, Me.....	Dec. 23, 1834
Pills, mode of counting.....	J. P. Peters.....	New York, N. Y....	June 27, 1839
Pole, life, and fire engine assistant	Wm. W. Vanloan....	Catskill, N. Y....	Feb. 2, 1822
Pulleys, improvement in.....	John Simpson.....	Decatur, Ga.....	July 7, 1846
Rat trap.....	Levi Kittinger.....	East Greenville, O..	May 8, 1846
Roasting coffee.....	Jas. W. Carter.....	Poston, Mass.....	Nov. 12, 1846
Reconductor.....	John Sargeant.....	Vernon, N. Y.....	April 23, 1816

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Saving oil in machinery.....	Devlan, Hancock and Wood.....	Philadelphia, Pa....	Aug. 8, 1846
Scalding hogs by steam.....	T. J. Goodman.....	Baltimore, Md.....	Feb. 13, 1835
Seine, fishing.....	Philip Groff.....	Little York, Pa....	Dec. 16, 1809
Seine, fishing.....	Samuel May.....	Columbia, Pa.....	Jan. 11, 1812
Seine, fishing.....	Russel Evarts.....	Madison, Ct.....	Mar. 21, 1838
Seine, fishing.....	Cyrus Tracy.....	Savannah, Ga.....	Sept. 19, 1838
Seines, knitting.....	J. D. Cornelius and J. Mott.....	Westerly, N. Y....	May 10, 1845
Splints, for baskets.....	Jos. L. Borden.....	Shrewsbury, N. J..	June 29, 1833
Splints, for friction matches	Stephen Dole.....	Concord, N. H....	May 30, 1837
Stencil-plate, apparatus for marking boxes.....	Edwin Allen.....	Windham, Ct.....	Sept. 4, 1840
Streets, sweeping	Levi Kidder.....	New York.....	Sept. 20, 1833
Sugar breaking	James Mitchell.....	Philadelphia, Pa....	Sept. 11, 1822
Sugar breaking	Wm. G. Sterling.....	Bridgeport, Ct.....	Jan. 23, 1829
Sun-flower leaves and rhubarb plants, as a substitute for smoking tobacco and for the formation of segars.....	Wm. D. Groff.....	Marietta, Pa.....	Jan. 8, 1839
Tents, portable, insect	Jas. H. Dakin.....	New Orleans, La....	May 30, 1842
Tobacco, cigar-fillers, machine for preparing	Joseph Maffet.....	Lancaster.....	May 16, 1832
Tobacco, cutting knife.....	James J. Mapes.....	New York.....	Jan. 22, 1831
Tobacco, cutting, machine for	Apollos Kinsley.....	Connecticut.....	Aug. 12, 1797
Tobacco, cutting, machine for	Peter Lorillard.....	New York.....	June 28, 1800
Tobacco, cutting, spun	A. Johnson, ass'ee of James Martin.....	Petersburg, Va.....	Nov. 19, 1833
Tobacco leaves, straightening	G. W. Macon.....	Louisburgh, Va....	April 18, 1846
Tobacco, machine for rolling	W. P. Marston.....	Danville, Va.....	April 25, 1846
Tobacco, manufacturing	J. Caldwell & C. Batterman.....	Albany, N. Y.....	June 26, 1793
Tobacco, manufacturing	Peter Lorillard.....	New York.....	April 25, 1810
Tobacco, manufacturing.....	Jno. Allen, jr., and C. Geoghegan.....	Richmond, Va.....	April 3, 1827
Tobacco, manufacturing	Chas. Geoghegan and Jas. Allen, jr.....	Richmond, Va.....	Dec. 6, 1831
Tobacco, manufacturing	Jno. B. Rappelyea and Joel Barnes.....	Covington, Ct.....	Nov. 19, 1833
Tobacco, manufacturing, chewing (called Roanoke leaf)	Edw. Chassaing.....	Baltimore, Md.....	Mar. 24, 1835
Tobacco, manufacturing, by machinery	James Mansey.....	Petersburg, Va.....	Aug. 15, 1834
Tobacco, snuff-cutter or grater.....	J. B. Partrien.....	New York.....	Nov. 30, 1812
Tobacco, spinning	A. Johnson, (assignee of James Martin) ..	Petersburg, Va.....	Nov. 19, 1833
Tobacco, spinning	Hiram M. Smith.....	Richmond, Va.....	Dec. 20, 1837
Tobacco, spinning spool for	S. and E. Hardy.....	Kennebec, Me.....	Dec. 30, 1820
Tobacco, spinning and turning of wheel	James Vanderpool and John Eagles.....	Newark, N. J.....	April 8, 1812
Tobacco, stemming.....	Germain Bréant.....	Richmond, Va.....	Nov. 11, 1830
Tobacco, tables for drying cut	Geo. Campbell.....	Schenectady, N. Y..	Jan. 7, 1829
Tobacco, twisting.....	John J. Heriges.....	Philadelphia, Pa....	June 13, 1831
Traps, for animals	Henry Adams.....	Erie county, Pa....	Aug. 10, 1833
Trap for catching animals.....	William Biddle.....	Pittsburg, Pa.....	July 12, 1839
Trap for catching animals.....	Thomas Shailer.....	Haddam, Ct.....	May 10, 1844
Traps for rats	Thomas Neill.....	Herkersville, O....	Jan. 23, 1836
Traps for rats	Thos. Kell.....	Alexandria, D. C....	Mar. 3, 1838
Traps for rats	Ebenezer Oliver.....	Philadelphia, Pa....	Oct. 22, 1842
Vault covers	Thaddeus Hyatt.....	New York.....	Nov. 12, 1845
Whale blubber, mincing	G. W. Soule and W. Carsley.....	New Bedford, Mass.	Oct. 6, 1843
Whips, raw hide, finishing.....	Charles Baeder.....	Philadelphia, Pa....	Dec. 28, 1846
Whips, twisted, whalebone	Joseph Reeve.....	Newburg, N. Y....	Nov. 25, 1808

*Reissued August 10, 1833.

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* Not found in classification. Patented January 7, 1835.

† In the classification the note attached to Atwater's patent should be attached to Spoor's.

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Young, W. G., assignor to A. H. Reip..	Bathing apparatus.....	20	341
Young, Wm. J.....	Compass, surveying.....	8	184
Zacharie, Peter.....	Excavator, mud machine.....	9	196
Zacharie, Peter.....	Nails and brads, cutting.....	2	53
Zahm, Godfried M.....	Lock and key, door.....	2	50
Zall & Doyle.....	Soap, making by steam.....	4	116
Zeigler, Wm. B., (not Zeagler as in Clas.)	Stoves, cooking.....	5	141
Zellers, Isaac.....	Thrashing machine, concaves, &c.....	1	32
Zellnor, Arnold.....	Flax and hemp, breaking, &c.....	3	78
Zellnor, Arnold.....	Flax and hemp, breaking, &c.....	3	78
Zigler & Enters, (Enters & Zigler in Clas.)	Light from stone coal gas.....	4	110
Zimmerman, William.....	Wind mill.....	11	236
Zimpel, Charles F.....	Car, railroad, running on a single rail	10	207
Zollickoffer, Wm.....	Wheels, apparatus to prevent falling, &c.....	10	212
Zollickoffer, William.....	Bating hides.....	16	293
Zollickoffer, William.....	Bating hides and skins.....	16	293
Zook, Shem.....	Plough.....	1	17
Zorger, Michael.....	Hulling clover seed.....	1	13
Zwahlen, Louis.....	Organs, seraphina.....	18	394
Zwisler, James.....	Candles, dipping and moulding.....	4	100
Zwisler, James.....	Candles, tallow and wax.....	4	101
Zwisler, James, jr.....	Tailoring, art of.....	21	354

CORRECTIONS.

NOTE.—The following corrections (not errors of the press) have been discovered since the foregoing pages were printed.

Page.	
3	9th line from bottom, read Moorhead & Howell.
6	27th line from bottom, read Webber Furbish.
9	13th line from top, read Levi Stevens.
17	18th line from top, read James Bootwright.
21 or 114	Insert Potatoes, sweet, mode of preserving, Aaron H. Vestal, 16th Aug., 1844.
23	14th line from bottom, read John F. Schermerhorn, &c.
24	Insert Smut machine, Joseph Klein, July 24, 1843.
25	4th line from top, read Elisha W. Young & Thos. H. Wilson.
28	Insert Threshing machine, Pliny Weller, March 7, 1846.
30	16th line from top, read David Flagg, jr.
36	Insert Rolling irregular figures to pattern, Wm. Field, Pawtucket, R. I., Aug. 7, 1844.
47	30th line from bottom, read Jas. Wood, sr., John Wood, and W. W. Wood.
49	14th line from top, read P. B. Quimby.
60	26th line from bottom, read Luther Boardman.
68	29th line from top, read Hugh Wightman.
71	24th line from top, read Geo. E. Waring, Richard E. Peterson, (administrators of A. S. Wolcott, deceased, and John Johnson.)
85	16th line from top, read David H. Gilbert.
94	16th line from bottom, read Sparkman & Kelsey.
95	25th line from top, read August 22, 1846.
109	Insert Gum, extracting from unrotted hemp, Sands Olcott, Harsimus, N. J., December 3, 1828.
110	26th line from bottom, read William Cornell.
113	27th line from bottom, read J. & N. jr., Parce.
114	Insert Preserving timber, &c., from decay, John H. Kyan, March 31, 1832.
125	16th line from top, read Frederick Grey.
125	8th line from top, read Geo. H. Crosley.
129	26th line from top, read William Blake.
133	8th line from top, read Silas B. Terry.
138	6th and 7th line from top, the note attached to Atwater's patent should be annexed to Spoor's.
138	7th line from bottom, read Thomas Mills.
141	8th line from top, read W. B. Zeigler.
141	30th line from top, read Simon Pettes.
151	23d line from top, read J. C. F. Salomon.
158	6th line from top, read Jos. S. Pirsson, jr.
160	27th line from bottom, read Elijah H. Read.
161	28th line from top, read Robert C. Grant.
170	15th line from bottom, read J. Townsend, assignee of W. Hunt.
185	9th line from top, read Isaac Schnaitmann.
187	15th line from bottom, read Bolles.
192	9th line from top, read Nathaniel Rider.
198	"Railroad plates, James Stimpson." The note attached to this patent should read—"Renewed and extended seven years," &c.
199	"Railroad, turning short curves, James Stimpson." The note attached to this patent should read—"Renewed and extended seven years," &c.
201	15th line from bottom, read C. J. Schirer, &c.
211	22d line from top, read Jos. F. Talson.
212	19th line from bottom, read John G. Tibbets.
212	10th line from bottom, read Jer. Wilt.
219	11th line from bottom, read Daniel Strobel, jr.
219	18th line from bottom, read John Stevens, jr.
219	19th line from bottom, read John R. Morrison

CORRECTIONS.

Page.	
220	34th line from bottom, read Jer. Garey.
220	9th line from bottom, read John Morris.
224	8th line from top, read Thos. B. Robbins.
225	15th line from bottom, read Joseph M. Wightman.
229	9th line from bottom, read Lonson Bush.
230	9th line from bottom, read W. L. Elgar.
230	34th line from bottom, read Clark Wilson.
231	18th line from bottom, read John Caldwell.
232	31st line from bottom, read F. H. Southworth.
239	17th line from bottom, read Chauncey Crane and Evert L. Wemple.
239	3d, 6th, and 33d line from top, read B. Morison.
246	4th line from top, read John Galvin.
253	16th line from top, read Wickersham & Crozer.
257	3d line from bottom, read David Stem.
257	33d line from bottom, read John G. Ross.
268	1st line from bottom, read Elijah Putnam.
282	24th line from bottom, read Benjamin Crehore.
294	15th line from bottom, read Moses Pennock.
295	14th line from bottom, read Peletiah Stevens, jr.
301	7th line from bottom, read Simon Snyder.
302	19th line from bottom, read Rouse & Taylor.
309	3d line from bottom, read William Beaman.
309	29th line from top, read Joel Pratt, 3d.
311	13th line from bottom, read Henry Bangs.
314	22d line from top, read Simon Willard, jr.
317	9th line from bottom, read Joseph Greenleaf.
322	Insert Copying machine, Luman Carpenter, Oswego, N. Y., Dec. 31, 1843.
323	32d line from bottom, read Samuel Fairlamb.
324	7th line from top, read Jer. Carhart.
324	17th line from bottom, read Middlebury.
327	24th line from top, read A. B. Taylor.
328	6th line from bottom, read Harvey Moore.
334	17th line from bottom, read "Paine & Bennet, (Paine, assignee of Haviland.)"
243	4th line from top, read John L. Sullivan.
352	10th line from bottom, read William Fosket.
352	7th line from top, read David L. Pendell.
352	1st line from top, read Henderson & Cooper.
352	8th line from bottom, read Russell Wildman.
358	Insert Pins, sticking into paper, John J. Howe, Derby, Conn., February 24, 1843.
376	Strike out Henry Bauss, &c.
378	Strike out Beeman, William, &c.
378	Strike out Belles, William, &c.
381	Insert Biggs, James, tenoning machine, C. 14, P. 281.
382	Strike out Black, William, &c.
394	Insert Francis & Thomas Burdick, mortising timber, C. 14, P. 271.
411	Crehore, Benjamin, for the 360 page read 282.
414	Insert P. P. N. D'Alvigny, bath, vapor, C. 20, P. 341.
419	De Savignac—see Savignac.
436	"Fosket, William," erase the parenthesis, and add class 21, page 352.
438	Insert Frazier, Blanchard & Gill, Stoves, C. 5, P. 136.
438	Erase Frick, Albert D., &c.
439	Fuller & Thomas—see Thomas & Fuller.
445	Goodrich, Gideon, &c., for 343 p. read 342.
477	Insert Jones, Eells & Griswold, Springs, carriage, attaching carriage bodies to them, C. 10, P. 211.
482	Insert George Kilburn, Machinery for raising heavy bodies, C. 12, P. 245.
505	Erase 12th line from bottom, and note.
516	Olcott, Charles, &c., C. 7, P. 169.
517	The note attached to "Osgood & Hunt—see Corning, E.," should be annexed to Osgood & Hunt above.
520	Erase Parker, Z. A., and notes.
523	Insert N. Peck & D. Taylor, Cloth manufacturing, C. 3, P. 69.
558	31st line from bottom, read H. G. Tyer and John Helm.
564	1st line at top, strike out the note attached to this.
593	White, Lemuel B., the error noticed here appears to have been corrected in the classification.

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